

Company Profile

A Publication from INPUT's Business Integration Programme - Europe

1996

Olivetti Increases Focus on Services and Vertical Markets

Despite an 8.4% increase in revenues in 1995 from \$5.7 billion (L9,076 billion) to \$6.2 billion (L9,840 billion), Olivetti turned out its worst ever loss of \$1 billion (L1,598 billion).

However, with a new structure in its Systems & Services organisation (OS&S), Olivetti now believes that it is poised for significant growth in selected vertical markets. In its new shape, Olivetti will be increasing its focus on services and is keen to change the market's perception that it is mainly a technology company.

This profile focuses on recent developments within Olivetti and presents details on:

- Financials in 1995
- The reorganisation of OS&S
- A new strategic focus on key vertical markets, such as Retail.

1995 — A Year of Mixed Results

In 1995, Olivetti reported a positive operating result of \$71.7 million (L114 billion) after it had consistently reported losses since 1991. Although an operating margin of 0.1% is not impressive, other factors indicate that Olivetti's restructuring measures are taking

hold. Over the past five years, the company has almost doubled its revenue per employee figure (\$206,000 in 1995) and has from 1992 to 1995 reduced the ratio of SG&A to revenue from 27.9% to 17.6%.

However, the restructuring has been expensive and was also the main reason for the large bottom line loss in 1995. The restructuring charges were \$706 million (L1,123 billion) of which some relate to actions to be completed in 1996.

When Olivetti in December 1995 went to the stock market to raise \$1.4 billion (L2,257 billion), it was the largest ever re-capitalisation of a company in Europe - and only one in a series performed by Olivetti's management over the past five years. The capital injection was needed for a financial restructuring of the company that has been incurring losses since 1991. Olivetti believes that it now has the financial foundation for a lasting turnaround.

Exhibit 1 shows Olivetti's worldwide revenues and operating and net results between 1991 and 1995.

Exhibit 1

Olivetti's Financial Results (in \$ million), 1991 to 1995

	1995	% Change	1994	% Change	1993	% Change	1992	% Change	1991
Revenue	6,189	8.4	5,708	5.4	5,417	7.3	5,048	-6.8	5,413
Operating Result	72	n/a	-11	-94.3	-194	-30.7	-280	1455	-18
Net Result	-1,005	135.4	-427	46.2	-292	-28.6	-409	41.5	-289

Source: INPUT

Olivetti generates about 80% of its revenues in Europe; within Europe Italy is by far its biggest market and in 1995 accounted for 31% of sales. Other important European markets were Great Britain (8.5%), Holland (7.6%), France (7.1), and Germany (6.9%).

Olivetti Systems & Services Re-organisation

During the second half of 1995, Olivetti announced a new strategic plan focused on venturing into the telecommunications market and developing its key vertical markets: Retail, Banking & Finance, and Public Authorities & Utilities.

As part of this restructuring, Olivetti has moved its hardware interests into separate companies: Olivetti Lexikon for printers and office products and Olivetti Personal Computers.

This new structure has left OS&S to concentrate on solutions for vertical markets, each with its own business unit - and services. Olivetti's services organisation is now divided into two units: OliService which focuses on the management of customers' IT operations,

and OliPRO which covers change management services, professional services and systems integration.

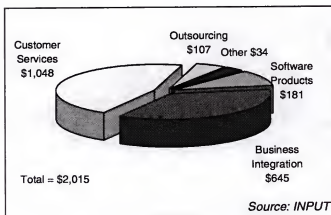
OS&S accounts for 58% or \$3.6 billion (L5,716 billion) of Olivetti's revenues. Some 56% of the OS&S revenues come from services. Olivetti's strongest services offerings are network services, desktop management, and multivendor hardware maintenance.

The majority of Olivetti's IT services revenues are generated from multivendor support services (around 46% in 1994) while Business Integration (BI) services accounted for an estimated 31% of Olivetti's services revenues.

Exhibit 2 shows INPUT's estimates of OS&S's 1995 revenue by services type.

Exhibit 2

OS&S Revenues by Service Type, (\$,000) 1995



Olivetti expects that the common features between its vertical markets — “branch-centric” and direct contact to the public — will provide opportunity to leverage technology and expertise across the markets.

Banking & Finance is Olivetti’s largest vertical market and accounted for 50% of 1995 revenues for OS&S organisation. The Public sector generated approximately 35% of the revenues while the Retail sector accounted for only 5%.

Exhibit 3

OS&S Organisation

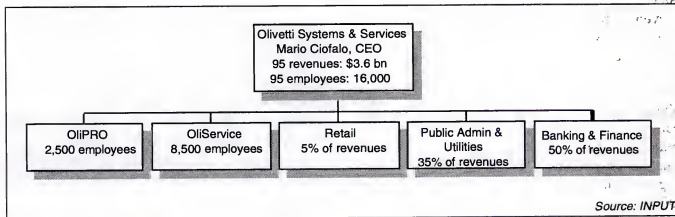


Exhibit 3 shows the new organisation of the Systems & Services group.

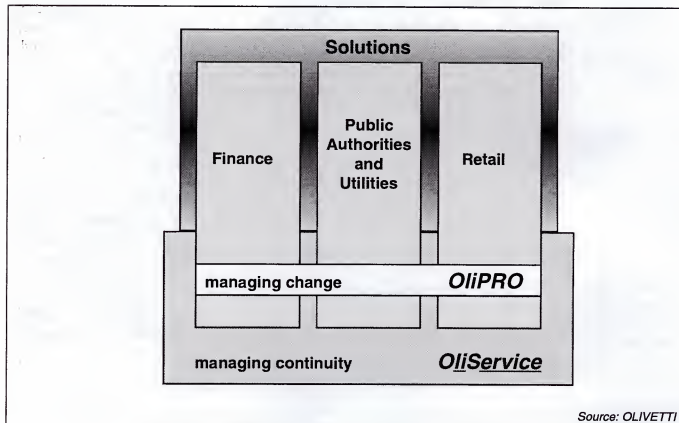
Following the recent restructuring, OS&S has been tasked with two major focus areas in its future growth plan: to concentrate resources on its most important customers, around 1,000, and to intensify its offerings in certain service areas. One specific target for the organisation is to double revenues from large projects over the next 3 years.

Olivetti is looking to grow its activities as a “Competence Integrator”, which it says will be a more fitting label in the future than Systems Integrator. The company believes that the winner in this specific field of the services market will be the company that can most effectively integrate the *competencies* of other companies — and not just their systems or components.

Other service areas that Olivetti will be focusing on growing are desktop facilities management and network integration services. In 1995, the company acquired the Swiss company Datrac as part of an acquisition plan for the network services business.

Exhibit 4

OS&S Functional Diagram



Source: OLIVETTI

Exhibit 4 presents the relationship between the vertical market units and the services units within OS&S.

The company is currently establishing account teams to address the issue of customer ownership. Worldwide account managers for key customers will have local teams reporting to them, consisting of experts from the relevant vertical market as well as consultants from the services units with a specific knowledge of the vertical market.

New Offerings for the Retail Sector

Olivetti has recently launched a series of new offerings for the Retail market that are built on OO technology with Microsoft-led OLE and COM standards and are also fully ARTS-

compliant (Association for Retail Technology Standards).

Olivetti believes that its application of OO in Retail solutions can remove the strictly functional view of the usage of IT. The company has developed an OO Business and Software modelling product, ARTIFEX, which will enable its consultants to adapt its OO applications to individual customers. The techniques around ARTIFEX involve analysis of the customer's business processes and iterative implementations during the development phases until the final customised version has been agreed. Olivetti expects its professional services revenues to increase in the future as technologies such as these become more complex.

One of Olivetti's strongest offerings in the Retail sector is its Point-of-Sale (PoS) solution for the Petroleum market. BP is one of the company's major customers in this market and has Olivetti's solution installed in more than 700 stations across Europe. Clients in the Petroleum sector also include AGIP and Mobil. Olivetti's services offerings for the Petroleum sector include applications consultancy, project management, training and support.

In the restaurant segment of the Retail market, Olivetti has a strong reference customer in McDonald's. The specific needs for speed, simplicity, and flexibility in a fast food environment like McDonald's have led to the development of Olivetti's new Olitouch PoS terminal. In the U.S., Olivetti has currently installed its PoS solution in close to 2,000 McDonald's restaurants. The company has signed contracts to install another 1,000 restaurants during 1996.

Olivetti's new back office application, ActionManager, is a combination of an expert system, a MIS system, and an E-mail system. ActionManager can automate all operational processes normally undertaken by a location manager. It gives the possibility for providing managers with real-time information on for example budgeted versus actual sales for any number of locations, automating processes

around hiring employees, stock control, and scheduling staff. The application, which was developed by Olivetti's partner in the U.S. Park City Group, has already been installed in a wide range of European retail organisations, such as Boots the Chemists, Burger King, and Disney Stores.

Although the application of multimedia technology in retail business applications is still not that widely spread, Olivetti is running a pilot project in a joint venture with British Telecom (BT) for Iceland, a U.K. retailer which specialises in frozen foods and white goods. This project is based on a multimedia kiosk which will allow the individual Iceland branch to carry a minimum of white goods stock. The solution consists of two parts: the customer kiosk where the potential buyer will be shown pictures and descriptions of relevant products, and the sales person's kiosk from where the buyers' criterias and wishes will be fed into the database to find the products that match best. The buyer and the seller will at all time during the process be connected via a video phone.

Olivetti is confident that this pilot, once fully rolled out over Iceland branch network, will provide it with an excellent reference site, leveragable into many other bid situations.

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CUSTOM PROJECTS

For Vendors—analyse:

- Market strategies and tactics
- Product/service opportunities
- Customer satisfaction levels
- Competitive positioning
- Acquisition targets

For Buyers—evaluate:

- Specific vendor capabilities
- Outsourcing options
- Systems plans
- Peer position

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Vendor Profile

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SAP Launch Internet-Enabled R/3

Following another stellar performance in 1995, SAP have recently made the next step in the development of R/3, their Enterprise-wide business applications software suite.

Although some of the heat has disappeared from their share price in recent months, SAP appear to have barely stopped to register the "SAP backlash" of the second half of 1995, and look poised to grasp the potential of the Internet very firmly.

SAP have announced that they are working with Microsoft, who they believe are well placed to integrate LAN-based client/server (C/S) technologies and the Internet, by layering R/3 applications software on top of Microsoft's C/S and Internet infrastructure.

SAP's tremendous success in capturing the Enterprise wide Business Software Applications market positions them well to extend their presence as client/server environments "mutate" into Intranet domains within the Internet.

This profile discusses:

- SAP's recent financial performance
- Details of SAP's Internet Initiative.

1995 Full Year Turnover Grows 47%

Exhibit 1 presents SAP's world-wide revenues for fiscal 1995. Until the middle of May these results are provisional, but still demonstrate that SAP has had another excellent year. 1995 revenues were up 47% to \$1.9bn.

Exhibit 1

SAP's 1995 Worldwide Results (Provisional) \$M

	1995	% change on 1994
Revenues (millions)	1,887	+47
Income before taxes (millions)	471	+43
Net profit (millions)	284	+44
Earnings per share	2.80	+44
Headcount (average for year)	6,443	+40

Source: INPUT

SAP, went public in 1995 which the corporate ambition of becoming a \$5bn company by the year 2000. This can only be achieved through an almost unprecedented 50% compound annual growth rate over the next five years, yet the company is at present dead on course to meet this target.

Exhibit 2 details these revenues by region and demonstrates the increasing pace of sales outside of the German market. Germany contributed 38% of revenues in 1994, but in 1995 this figure is down to 26%, although growth in the home market was still, at 24%, far from sluggish.

Exhibit 2

SAP's 1995 Revenues By Region \$M

	1995	%	% change on 1994
Germany	504	26	24
UK	66	4	92
Rest of Europe	565	30	N/A
USA	504	29	52
Japan	88	5	146
Rest of World	160	6	N/A
Total	1887	100	47

Source: INPUT

The most noticeable trend in these numbers is the growth of sales into Japan, where SAP now generates greater revenues than in the UK.

Of new orders, 92% were for SAP's client/server product, R/3, which has established itself in an extremely short period of time as the market leading application software product. R/2, SAP's previous

mainframe generation product still contributes to revenues a stable, loyal client base which SAP expects to support and reap healthy maintenance revenues from for some considerable time.

Internet Initiatives Are Both Offensive and Defensive

SAP have recently announced a programme to work with Microsoft and standards organisations to develop common interfaces for conducting business transactions over the Internet. Launching this initiative at CeBIT, SAP are aiming to build on Microsoft's implementation of open Internet standards and offer Internet and Intranet enabled SAP R/3 capabilities.

Under the leadership of Dr Ruediger Buck-Emden, world-wide Internet Technology Manager, SAP intend to offer access to mission-critical business systems through and over the Internet and provide a "top-to-bottom platform for Internet commerce".

The business application programming interface (BAPI) is SAP's version of Microsoft's implementation of open Internet industry standards, including Microsoft AE Internet Information Server, merchant server, Microsoft Explorer and ActiveX Technologies.

BAPI, which is being developed in conjunction with the Open Applications Group (OAG), will allow any client front-end to access any back-end business system. This will create an environment in which real-time transactions are enabled even if the two "different ends" are based on different cores technologies.

Microsoft currently have a project code-named Nashville designed to unify Windows and Internet technology, and aimed at removing any complication as a user in moving from one environment to another. This will, in theory, be a seamless link into R/3 platforms.

BAPI will also embrace standards emanating from the World Wide Web Consortium (W3C) and the Internet Engineering Task Force (IETF).

These developments add further momentum to SUN's Java initiative and the attempts to push the Internet's "envelope" beyond its present static, read-only nature, into the brave new world of Internet applications and business processes.

SAP see that Internet related security and bandwidth issues will be resolved over the medium term, and that already in Intranets these issues are becoming less of a concern to IS managers. SAP note that high-speed bandwidth will soon be available.

SAP distinguish between simple transactions and the more complex ones that underpin the OLTP nature of the core modules of R/3, which address financial and manufacturing processes.

R/3 will have Internet-enabling technology, SAP Automatic Interface, seamlessly integrated into the core modules allowing front-end transactions to be browser based. Not all employees will have or require pure R/3 interfaces, but most will have a WWW style interface.

WWW interfaces will allow R/3 to have a greatly simplified user interface enabling greater numbers of people to use the functionality of the core system.

This will clearly reduce the training requirements needed to use the enterprise wide functionality of SAP products.

Some of the key criticisms SAP have faced regarding R/2 and R/3 is the complexity of the technology, its unforgiving programming and access interfaces, and the huge training budget required to ensure that the system is

used properly. Internet enabled access will go some way to address all three of these concerns.

SAP see these developments as the first step on a road which they concur would have seemed unlikely even six months ago. The next challenge is to simplify transactions and use interfaces. As SAP are demonstrating, Net technology can give these processes a great deal more functionality and user appeal.

SAP perceives the need to simplify and redesign transactions to enable easier utilisation. Improvements will be targeted at order entry systems, internal ordering of office materials, and remote booking of office facilities such as meeting rooms and conference suites.

The first wave of this trend is to start with simple solutions for relatively simple processes where users are accessing information, or tracking the status of an order.

The second wave will be in areas where specialists are presently using R/3.

SAP's transaction improvements include areas such as:

- Availability verification
- Customer Authorisation
- Real-time order status tracking.

SAP's prime reference site for these developments is Germany's largest distributor of Apple products, Prisma. Here, SAP have been developing order systems, using Web technology seamlessly integrated into R/3 platforms, to allow greatly simplified supply chain management and customer order fulfilment.

This project allows a customer to see and interrogate WWW format product brochures and then place formal, secure orders which are logged directly into the fulfillment system.

Prisma see competitive advantage in the use of this new development; Internet enabled R/3 being an extremely attractive way of gaining "customer lock-in".

SAP are working alongside the Munich based company iXOS, who run the Microsoft Competency Centre within SAP, and have experience in optical archiving and Unix-based technologies.

One of the questions that arises from these developments regards the very nature of competitive advantage which technology has traditionally promised to provide.

Arguably, competitive advantage appears to be diminishing due to the increasing speed of technology "churn", and the increasing speed with which organisations are able to respond to new technological developments.

Four months ago, Microsoft to the gleeful exclamation of many, appeared hopelessly adrift in their misreading of the characteristics, nature and impact of the Internet. Yet, within the course of these short few months a number of strategic deals appear to have placed them firmly back in centre court.

Although the Internet is now seen as a paradigm shift, a fundamental dislocation in

the development waves of IT, the current extremely short cycles of initiative and response by major vendors in the context of a "year zero" environment ensure that today's seeming competitive advantage fades quickly in tomorrow's cruel sunlight.

SAP's Internet initiative must be seen as both an offensive and defensive strategy; clearly SAP are asking the question what are the potential revenues this initiative will generate. But in some senses the more important question they have addressed is what will be the damage of not embracing the Net?

The damage they face if they do not undertake to embrace the rise of the Internet by placing R/3 on the Internet platform is that R/3 would become an isolated proprietorial kingdom surrounded by the Net, and in which new Net based applications and development tools relentlessly eat away at the functionality and coverage of R/3.

Presently Internet enabled R/3 is not a revenue stream, nor is being "sold" and there are, other than Prisma, no companies actually using the technology "in anger".

However, SAP see revenues coming on stream in early 1997, stating that this is a "first footprint" and an area of heavy investment and in which they are deploying core resources. Internet enabled R/3 is a "high priority" issue and more announcements will be made at SAP's developer conference at Orlando in May.

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Vendor Profile

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MCI Communications - Driving into Integrated Services

Inevitably, there has been something of backlash against the concept of *Convergence* over recent months. AT&T's recent "demerger" has been interpreted by some commentators as evidence that *Convergence* is essentially operationally untenable, and that it supports the demise of the "smaller share of larger markets" argument.

However, *Convergence's* underlying technological foundation is still indubitable, and more sober reflection suggests that AT&T's actions were driven more by the need to face the implications of a particular failed acquisition rather than to re-correct the underlying strategy.

The convergence of information technology and communications, long heralded, is finally becoming a reality, is increasingly influencing the individual development of both areas, and is making it no longer feasible to think about IT and communication technologies in isolation.

The commercial ramifications of these technological developments are creating, what, even six months ago, would have appeared a number of unusual alliances.

One of the most interesting of these new relationships, and the focus of this profile, is the recent acquisition of the systems integrator, SHL Systemhouse, by the second largest US long-distance telecommunications carrier, MCI Communications.

MCI, with the avowed intent of challenging AT&T and BT in the fight to become the world's premier information services player, has entered a period of aggressive expansion based on both organic and acquisition led growth.

This profile examines:

- MCI's recent moves to extend their service offerings
- The impact and implications of the SHL Systemhouse take-over
- Changing competitive conditions in the European telecommunications market from which MCI hopes to benefit.

MCI Strives to Extend Service Offerings

MCI with revenues of \$13 billion in 1994 are the second largest long-distance carrier in the USA.

However, CEO Bert Roberts Jr, has recently stated that his objective is to transform MCI into a diversified communications conglomerate, and that MCI's corporate objective is "to get to the future before AT&T".

Roberts believes that MCI can no longer thrive in one area of activity. He estimates that by 2000 half of MCI's revenue will come from products/activities that MCI does not currently offer.

MCI is trying to push a trend towards competing on its "integrated service offerings" rather than on price, aiming to win the loyalty of large multinational customers who are looking to rationalise their complete communications procurement requirements.

Integrated packages MCI offer include customer service call-centres, helping corporations install advanced computer and telephone networks and processing credit card transactions for banks and retailers.

MCI is also counting on integrated services to dominate the global market. Already the fastest growing international carrier for basic voice service, MCI is adding 50% more traffic every year. Concert, its joint venture with BT, is a private network that serves companies with worldwide offices and provides a number of ways for companies to exchange data internally. Most conveniently of all, Concert puts voice and data traffic onto a single bill offering companies the ability to deal with a single customer-services organisation.

To further this end, MCI has over the last year been building a series of alliances which

attempt to take the organisation outside of traditional areas of operation.

Primary amongst these have been the offering of 20% of stock to BT for \$4.3 billion, and, most controversially, the \$2 billion investment in Rupert Murdoch's News Corporation. The development of the relationship between BT and MCI hints at an increasing co-operative role between BT's system integration arm, Syntegra, and SHL. MCI have also announced a deal with Microsoft whereby MCI will market Microsoft products, including a customised version of MSN, and provide a new delivery channel for software upgrades. Oracle are also planning to become an active partner in this new, and potentially extremely powerful, trading block. Exhibit 1 provides a schematic of these relationships.

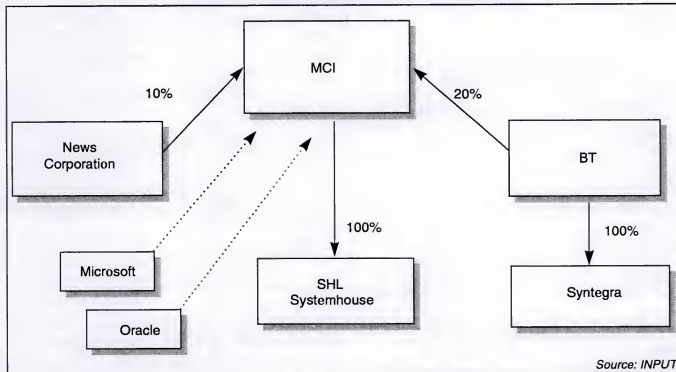
MCI have been extremely active in enhancing service offerings through joint ventures in Mexico and Canada, new businesses in consulting, software, Internet access, paging and cellular communications, and the construction of alternative local telephone networks in 14 US cities.

In August 1994, MCI restructured putting traditional long-distance services into a new division, MCI Telecommunications, which will focus on selling high-margin packages of telephony and consulting services. New businesses and global joint ventures have been placed into another division, MCI Ventures & Alliances.

More recently, MCI has made repeated efforts to enter the fast-growing market for cellular and wireless services, including the acquisition of Nationwide Cellular, the largest US reseller of cellular services for \$190 million.

Exhibit 1

MCI – BT News Corporation Equity Relationship



Since May 1995, MCI has also contracted to resell services from five other cellular providers, including AT&T, which means the company can now offer service to 75% of the US population.

By not investing in a wireless infrastructure MCI has been able to offer significantly lower cost services.

MCI metro is MCI's local service division that has installed fiber optic networks in 14 cities, hooking businesses directly into MCI's long-distance network.

\$1 Billion Strategic Acquisition of SHL Systemhouse

Furthering a strategy aimed at integrating computing and communications offerings, and,

by coincidence, on the same day as the AT&T demerger announcement, MCI announced its offer to buy the increasingly high profile Canadian systems integration and outsourcing vendor, SHL Systemhouse.

The deal, worth \$1 billion in cash, will leave SHL as a stand-alone operating company within MCI.

SHL Systemhouse has been instrumental in driving the message of transformational systems development, either through outsourcing or project contracting, over the last two years.

Recognising the need to help organisations migrate from legacy platforms to predominately client/server environments, SHL have ridden a wave of marketplace

demand which has seen them achieve world-wide revenues of \$850m, \$100m (12%) of which comes from its 700-strong European operation. Exhibit 2 details SHL's European revenues by delivery mode.

Exhibit 2

SHL Systemhouse Analysis of European Revenues

Delivery Mode	(\$m)
Mainframe Systems Management	8
PC & Desktop Systems Development	50
Client/Server Software Development	10
Consultancy (BPR)	17
Training & Education	15

Source: INPUT

SHL, unlike competitors from equipment of personnel with legacy platform skills. It's technology skills set is exclusively centred on

Exhibit 3

Client/Server Systems Management Capability

Scope of geographic coverage	Global	HP		
		EDS	AT&T	IBM
		Olivetti		MCI/SHL
	National	CGS Sema National PTTs Computacenter		
		LAN or WAN	LAN and WAN	
Scope of client/server management offering				

Source: INPUT

Source: INPUT

new systems, backgrounds does not have legacy baggage in terms.

SHL has broad experience in client/server consulting and development and has developed a methodology, *SHL Transform*, which it is offering as a stand-alone product as well as utilising within its own client projects.

Transform is an object-oriented software tool containing:

- Routemaps of best practice development methodologies
- Project management, process mapping and workflow modules
- Training modules
- Overview of relevant metrics

Exhibit 3 provides a competitive analysis of SHL's client/server capabilities against a number of other leading vendors.

SHL's European, non-outsourcing based, client references include organisations such as the world's leading marketing communications group WPP, the cellular phone unit of Cable & Wireless, Mercury, KLM, and the computer games manufacturer, SEGA.

Another prominent organisation which has used *Transform* includes, the now ING owned investment bank, Baring Asset Management. SHL has assisted Barings in designing and implementing client/server architectures utilising Hewlett-Packard servers and with the development of new applications to run on this infrastructure.

Telecommunications; A High Growth SI Opportunity

The telecommunications sector has replaced the financial services sector as the most dynamic area for the adoption of new technologies and has led some to dub it the "New City"; the "City" of London being the last area to witness such high growth rates of IT related investment.

Exhibit 5 provides a forecast of SI related growth in the European telecommunications market until 2000.

However, this explosive growth is not unsurprisingly attracting growing numbers of

vendors into the European telecommunications marketplace.

These include traditional, existing European SI players who are attempting to manoeuvre their services offerings away from low-growth or stagnating vertical markets, as well as players new to the European market or new to the IT services industry altogether. MCI fall into this latter camp.

AT&T have recently announced their intention of competing head to head with BT in the UK market including in the residential services, and aim to generate revenues of \$1 Billion in the UK by the end of the century.

Heightened levels of competition in a market which is undergoing, and will continue to undergo for some time, fundamental structural transformation will present major challenges for all interested parties.

Roberts sees MCI's primary strength as an aggressive marketing orientation; a strength they will need as they face threats in their primary market posed by the US Telecommunications Deregulation bill, which would allow the seven regional Bell operating companies to compete with MCI, by offering long-distance services, slimming MCI's already narrow margins.

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Acquisitions Drive WM-data Into Distributed-Based Environments

Recognising the need to develop service offerings in tune with increasing demand in open, distributed environments, WM-data, the leading Swedish services vendor is planning to continue on its aggressive policy of acquisition based growth.

However, this strategy is being executed as the Swedish market shows early signs of entering a period of relative economic slow-down and potential stagnation.

Although WM-data has so far successfully managed to maintain profitability whilst conducting significant acquisitions, the latest of which is the PC dealer Owell, WM-data face significant challenges over the next two years if it is to retain its predominant position across Sweden and the Nordic countries.

This profile presents a brief snapshot of WM-data focusing in particular on:

- Recent financial performance
- The move into low-end, open, distributed environments
- Challenges from changing market conditions and growing competition

1996 Target is \$750m

WM-data's 1995 revenues rose to \$457m (Sek3.4bn) whilst profits reached \$41m (Sek310m). This 69% revenue increase followed a 1994 performance which itself represented a 65% growth over 1993. Planned turnover for 1996 however is only \$750m which in the wake of the Owell acquisition suggests that organic growth over 1996 will be relatively modest.

The company, formed in 1969, has enjoyed growth in all three of its main operational areas, namely:

- Professional Services
- Packaged-Based Solutions Delivery
- Customer Services

Exhibit 1 presents a five year view of WM-data's operating revenues, net income, and staff numbers whilst Exhibit 2 provides an analysis of 1995 revenues by INPUT's delivery modes.

Exhibit 3 analyses WM-data's revenues by industry sector.

Exhibit 1

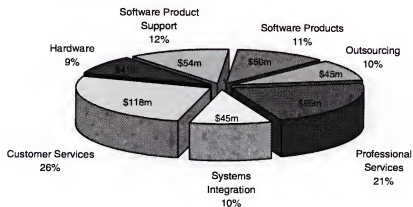
**WM-data Financial Performance
(\$m) 1991-1995**

	1991	1992	1993	1994	1995
Revenues	116	122	182	270	451
Net Income	14	11	14	23	41
Staff	1,117	1,145	1,520	2,080	2,300

Source: INPUT

Exhibit 2

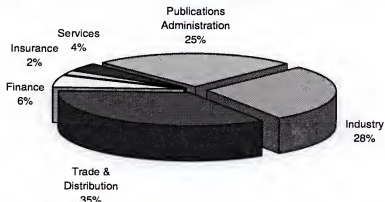
Wm-data 1995 Revenue Analysis by INPUT Delivery Mode



Source: INPUT

Exhibit 3

WM-data 1995 Revenue Analysis by Industry Sector



Source: INPUT

OEM based hardware revenues, \$41m in 1995, will receive a significant boost in 1996 with around \$186m of new revenues coming from the acquisition of the PC dealer Owell.

Just over \$100m of revenues is derived from software product sales and subsequent support, whilst the other \$300m is achieved through people-based business, which WM-data consider to the "the soul" of their organisation.

Fifty percent of turnover is in, what WM-data consider to be, longer term deals (over two years in duration) which they label as "partnership" based business. Partnerships are seen, in financial terms, as being based on contracts of over \$1.5m.

The other fifty percent of "people-business" can be categorised as traditional time and materials based contracts. The company see however that the percentage of partnership related revenues will rise to 60% over the next two to three years.

WM-data are investing heavily in entering the multi-vendor service arena and to this end have formed a joint-venture with the Swedish PTT, Telia, to offer open-technology based call center support and Computer Telephony Integration (CTI).

WM-data are developing a number of partnership based business streams with Telia and both organisations act as agents for each others products and services. Either party can sign deals with customer organisations on behalf of the other company. This relationship has developed as a consequence of Telia being one of WM-data's most significant customers through 1994 and 1995.

In the software product market WM-data have a number of strong relationships with players such as Dun & Bradstreet, MSA, and SSA.

The nature of these links limit the extent to which WM-data can develop contacts with one of IT's major success stories in 1995, SAP, though they state that they are currently re-appraising their strategy in this arena of potential conflict. At present WM-data are offering SAP R/3 computer based training courses.

Another issue to be factored into a decision on to whether to align themselves more closely with SAP's success is that WM-data themselves offer their own business application software product, Prosit ("Open" in English) into the marketplace.

Prosit which is currently installed in close to 500 sites across the Nordic region has been highly successful for WM-data over the last five years.

However, as demand for R/3 grows in the Swedish market in 1996 and beyond, as it is undoubtedly doing currently, WM-data will face the need to either compete head to head with SAP or develop a significant R/3 based professional services capability. Attempting to do both will arguably be untenable.

Acquisition of Owell Continues Moves Outside of the Data Center

WM-data acquired the PC and workstation dealer Owell in September 1995. Owell, with 200 staff and 28 local outlets across Scandinavia, will add \$270m in revenues in 1996 and bring WM-data increased presence in the booming low-end client/server and desktop integration area.

The acquisition is part of a move into distributed environments and away from a concentration in what has been WM-data's traditional heartland; mainframe-centric development support and consulting.

WM-data already claim strong Unix based skills, but clearly see the need to further strengthen this element of their service offering to meet market demand. The organisation is also developing Object-Oriented and Multimedia based offerings.

Changing Market Conditions

The Swedish market, which grew strongly in the period 1993 - 1995, is beginning to exhibit signs of slowing down with growth rates in a number of WM-data's target markets stalling. WM-data's three percent organic growth target is a reflection of this development.

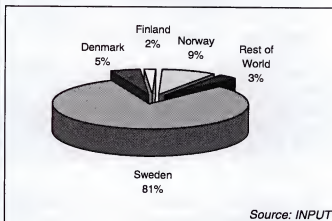
However, WM-data chose to see the upside of this slowdown and plan to use the coming period as an opportunity to continue on the acquisition path and benefit from buying organisations more cheaply than in bull market conditions.

Partly driven by this slowdown in their home markets WM-data are looking to enter a period in which they expand their operation outside of the Nordic countries.

Predominately this development is being driven by relationships with clients who themselves are entering new country markets and require support in these initiatives from suppliers they know and trust. However, WM-data sense that if they are to grow into a major pan-European services provider, they must become less reliant purely on the Swedish market. Sweden presently generates over 80% of revenues as shown in Exhibit 4 which provides an analysis of WM-data's geographic coverage.

Exhibit 4

WM-data 1995 Revenue Analysis by Geography



The broader European market offers enormous opportunity to WM-data over the medium term, especially as remote support and advanced networking techniques begin to offer vendors novel, potentially cost-effective, approaches to their customer's development and support requirements, which no longer require the need for staff to be relocated, or hired, abroad.

WM-data already have a relationship with DEC Customer Services, who they use for local support where it is needed but they will be looking to leverage their strong EDI-based service offering into the many large, international organisation such as SAAB and Ericsson who are themselves currently involved in aggressive moves.

WM-data have also developed a strong relationship with ICL, who are presently providing the hardware platform for a major WM-data systems development project with the state owned nation-wide pharmaceutical retail chain.

WM-data is in an extremely strong position within the Swedish market, and to a lesser extent the whole Nordic region. However, as

can be seen at the European level the dynamics of competition between large, pan-European services players and incumbent "national champions" is changing.

These broad based full service organisations are embarked on an aggressive period of expansion and pose a serious threat to the established order. Although the effects of these dynamics have yet to fully play out in smaller markets such as Sweden, they

undoubtedly will. It will only take an organisation such as EDS (at present a third of WM-data's size) or CSC to strike a small number of further major deals for the competitive playing field in Sweden to change considerably.

Organisations such as WM-data face the pressing need to examine "comfort zones" and long held conventional wisdom and prepare to face serious challenges in the coming period.

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- Product/service opportunities
- Customer satisfaction levels
- Competitive positioning
- Acquisition targets

For Buyers—evaluate:

- Specific vendor capabilities
- Outsourcing options
- Systems plans
- Peer position

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Vendor Profile

A Publication from INPUT's Business Integration Programme – Europe

1995

EDS Produce Record Year— Ambitions Justified by 43% Revenue Rise in Europe

1994 proved to be a record year for EDS at a worldwide level. Much of this global success was due to a particularly strong performance in Europe.

European revenues derived from non-General Motors sources rose 42%, thanks largely to growth in German and UK operations.

These results come at a time when EDS are pursuing ambitious plans to deliver IT to an agenda emphasising business metrics, such as improvement in market ranking or of earnings per share, rather than to one consisting of IT specific metrics. The 1994 figures would suggest that these plans are beginning to enjoy considerable success.

This profile presents an overview of recent developments at EDS focusing on:

- Latest financial details
- The continuing push behind *Co-Sourcing*
- The outcome of the long running AT Kearney saga

- Major Contract Wins.

Non-Captive European Revenues Reach \$1,308m

EDS's European revenues for 1994 reached \$1.8bn, an increase of 28% on 1993. *Base systems* revenues (EDS terminology for revenues from non-General Motors sources) were \$1,308m, an increase of 43% on 1993.

Revenues in the UK were \$474m, up 20% and German revenues reached \$560m.

Exhibit 1 provides an analysis of EDS's European revenues by country and Exhibit 2 provides a breakdown by delivery mode.

Worldwide revenues were up 17% in 1994 and passed the \$10bn mark for the first time, reaching \$10,052m. *Base systems* revenues increased 24% and now, at \$6,505m, represent 64% of overall revenues.

Exhibit 1
**1994 Market Analysis by Country
European Information Services
(\$ millions)**

Geographic Market	Revenues*	Per cent
France	385	21%
Central Europe (Germany/Austria/ Switzerland/E. Europe)	567	31%
UK	420	23%
Spain/Portugal	90	5%
Italy	130	7%
Northern Europe (Scandinavia/Benelux)	240	13%
Total European Revenues	1,831	100%

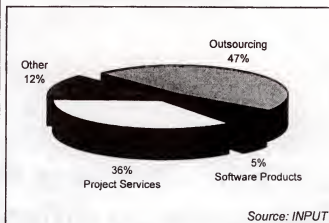
Source: INPUT estimates

* Total revenues for each country incorporating both GM revenues and external revenues but excluding interest.

Exhibit 3
Five-Year Financial Summary (\$ millions) (FYE 31.12)

Year	1994	1993	1992	1991	1990
Revenue	10,052.4	8,561.8	8,218.9	7,099.0	6,108.8
Annual growth rate	17%	4%	16%	16%	12%
Profit before taxes	1,284.2	1,131.3	1,000.8	893.7	788.7
Annual growth rate	14%	13%	12%	13%	16%
Profit after taxes	821.9	724.0	635.5	547.5	496.9
Annual growth rate	14%	14%	16%	10%	14%

Source: EDS

Exhibit 2
Analysis by Delivery Mode


Net income rose 13.5%, from \$724m to \$821.9m, and income before tax was up 12% to \$1,284.2m from \$1,131.3m in 1993.

Exhibit 3 presents a five-year worldwide financial summary .

Co-Sourcing Appears to be Gaining Marketplace Acceptance

Co-Sourcing is EDS's response to a growing appreciation amongst many leading IT user organisations that the achievement of IT related service levels, either by themselves or by external service providers, is not directly benefiting their organisations.

Co-Sourcing attempts to offer organisations a model that maximises the potential *business benefits* of using IT rather than just purely regarding IT as an overhead to be managed on a minimum cost basis.

EDS argue that cost improvement of IT spend (typically between 1-7% of overall revenues) although obviously of benefit to an organisation, will be of less benefit than if improvements are made in the remaining 90+%; i.e. a 15% saving on 3% of revenues may make only a small impression at the enterprise level.

Trimming costs of goods sold by 1% for a retailer, for example, will be of far greater benefit to the business than cutting overall IT costs by 30%.

These examples reflect the increasingly holistic view EDS claim they must take in assessing and improving business processes which have IT embedded in them, rather than just purely concentrating on the IT systems.

EDS's marketing and selling proposition is focused on a business benefits message directed towards senior business people. Selling technical support services to IT directors on a short term time and material basis is becoming inconsistent with EDS's new found philosophy.

This focus on large contracts with large organisations is resulting in some significant reshaping of their business. In France EDS

are divesting their body shopping operation, GFI, to Novelliance, as it no longer presents a style of operations they want to focus on.

They also perceive that revenues per head and profit per head are much lower in this style of operation, and that net profitability is 2-4% rather than 8-12% for the higher value added business.

EDS argue that Co-Sourcing is a logical extension of their outsourcing capability and represents the next stage of maturity in the IT services arena. They suggest that "unlike most other industries the IT services industry has virtually no rules of engagement and that organisations are limited only by their imagination and to an extent their financial resources".

There has been an evolution in the marketplace they suggest, as shown in Exhibit 4, from "box minding for a fee", though "service levels for a fee", to "business values on a shared risk/reward business".

Exhibit 4

Evolution of Strategic Positioning

Past	Present	Future
Box Minding for a Fee	Co-Sourcing	"The White Space"
IT Service Levels for a Fee	BPM	?

Source: INPUT

Systems integration used to start with a technical specification while a system management project began with established performance requirements. This, EDS argue, is changing and reflects a limited and limiting view of the potential IT has.

Significantly, EDS are already active in developing the next stage of service delivery, presently labelled "the white space" beyond Co-Sourcing. Although they are not clear what this may be they clearly believe Co-Sourcing is not the vanishing point of this maturing value chain.

EDS state that the gap between the vendor promised benefits of technology and it's actual impact in added business value, or benefits in performance and productivity terms is called the Impact Gap. Co-Sourcing attempts to address this gap.

EDS state that the critical success factors behind the Co-Sourcing concept are:

- Financial Stability
- Willingness and ability to share risk
- Service industry credibility
- Ability to integrate and motivate people
- Ability to work in harmony with partners
- Relevant business process skills
- Large project management skills
- Total IT skills.

Few suppliers in EDS's opinion offer this range of skill, experience, and vision and thus few are in a position to play in these maturing market conditions. Similarly very few enterprises have the strength, breadth and depth of skill necessary to manage the application of IT as well as exploit their own business entirely.

EDS have significant financial resources, backing, maturity and experience in handling far flung projects across the world and though claiming that in selling at a local level they

appear as a "boutique" firm, i.e. offering a highly personalised service, they are able to bring to bear all of their worldwide resources if need be.

Another element of this movement is the fact that pure IT systems integration margins are suffering significant erosion and, some believe, have the potential to make this style of operation a zero dollar business.

AT Kearney's Decision Boosts Consultancy Growth

The other factor which EDS are concentrating on in supporting this Co-Sourcing and Value-orientated initiative is the building of its consulting capability.

Consulting initiatives began in earnest in July 1993 with the recruitment of Michael Gleason from Coopers & Lybrand. John Pendlebury, another senior C&L partner joined in Europe in October 1994, and has been instrumental in building the practice up to its present size of around 200 people in Europe. Patrick McHugh, responsible for Coopers and Lybrand's reengineering practice has also recently joined.

EDS's goal is to have 5,000 consultants on staff at a worldwide level within 5 years; there are presently 1,800. The UK practice has grown from 20 to 70 people since the beginning of 1995.

These plans have received a significant boost with the recently announced decision by the US consultancy firm, AT Kearney, that they will be merging with EDS.

This move which had been under discussion for a considerable period of time, and had appeared in late May to be a signed deal, then days later appeared cancelled, was finally completed in early June.

Kearney will add possibly as much as \$350m to EDS's consulting revenues and create overnight one of the world's biggest consulting operations. Senior AT Kearney partners, have been offered around \$4m each through a 10 year annual payment deal which will attempt to stop a possible "brain-drain".

EDS's existing consulting interests will now be placed within Kearney which will trade under its existing name as a separate division. The division will be run by Kearney's chief executive officer, Fred Steingraber; Mike Gleason, presently running EDS management consulting services will report to Steinberger, who in turn will report to EDS board member, Gary Fernandez.

Industry rumours suggest that EDS's management consulting operations lost \$200m in 1994 on revenues of \$200. Clearly to build a practice of any size and resilience in such a short period of time EDS will have to sustain this type of scenario for some considerable time.

The consultancy offering has not been positioned as a form of "loss leader", consultancy day rates are believed to be equivalent to those of the big audit based firms, and it will clearly be required to stand alone within a reasonable period of time.

EDS have announced that they have in fact not acquired Lucas Industries' independent management consulting arm, Lucas Management Systems (LMS) which was a key part of a major Co-Sourcing deal signed in April.

This deal was one of EDS' most significant recent contract wins and involved EDS taking responsibility for Lucas's worldwide internal IT operations, as well as gaining LMS. The Lucas deal was worth £750m over 10 years. Success in implementing common working

processes for General Motors on a global basis was instrumental in persuading Lucas that EDS were capable of handling their worldwide requirements.

John Bateman, European Group Executive is on record as saying that "EDS' abilities start at consulting and that this played an important part in forming the relationship with Lucas".

EDS would have also gained access to the project management tool Artemis which was developed and was being successfully marketed and sold by Lucas Engineering, another independent part of the Lucas industries conglomerate.

However, some time after the initial news of these developments became public, Lucas announced that Computer Sciences Corporation (CSC) would be replacing EDS in all aspects of the contract.

All three parties have attempted to position these developments positively, but whatever the (closely guarded) truth of the matter, they do represent a setback to EDS's high risk, but potentially high reward consultancy initiative.

It will be some time before it is clear whether these moves are a success, but its success will be a necessary contributing factor to the success of the overall drive into value and business based metrics.

Major Contract Wins

In Italy, EDS signed a 10 year deal worth \$400m with the Italian insurance group INA to undertake all major systems development related development and operations activity.

A worldwide deal was struck with Xerox to migrate towards distributed client/server and, importantly, the standardisation of all applications.

EDS are assuming responsibility for most of Xerox's global IT needs, including data centre operations, desktop systems support, worldwide voice and data telecoms networks, and many business support applications.

In the UK, the Royal Bank of Scotland (RBS) awarded EDS a 10-year cheque processing contract. Two processing centres, capable of handling 300 million items each year, are being built and financed for RBS by EDS.

Growth in the use of debit cards has meant a sharp reduction in the use of cheques across Europe; this has placed pressure on RBS' operation and they have decided to regard this as a non-core business activity i.e. an activity which gives them no competitive edge. EDS are investing \$45m to build the data centres.

Another major project EDS have become involved with in tandem with RBS is the Inter Bank On-Line system (IBOS), which is being developed by a consortia including RBS, EDS, Goldman Sachs and the Spanish bank Santander, amongst others.

This is a pan European banking systems, analogous to the SWIFT reservation system developed by many major airlines in the early

1980's. EDS are an equity partner in the deal, rather than just a supplier to the consortium.

Other major non-outsourcing contracts include London Underground, where EDS are now supporting the organisation's move towards a Windows NT environment and Shell UK, where EDS have won a contract to handle credit card payment transactions support.

Exhibit 5 presents a classification of these contracts according to the model as shown in Exhibit 4.

EDS's "value" proposition is still in its early days; they admit that the big contracts are still on a fixed price-fixed time basis.

The relationship between IT and business metrics is still, many people argue, undefinable. The long term question must be, can EDS and other players moving down this same road really deliver against business metrics, such as Earning Per Share or increased market share? The jury has yet to even retire to consider this question.

Exhibit 5

Contract Review

Traditional	Co-Sourcing	Business Process Management
Inland Revenue	Royal Bank of Scotland	National Westminster Bancorp
American Express	Moore Corp	Care 1st HealthPlan
Xerox	IBOS	
Lucas		

Source: INPUT

Developments in Sweden may offer some insights into the future shape of these issues. Kooperativa Forbundet (KF), Sweden's largest retailer lost 5% market share to ICA Handlanrna after ICA had been able to cut prices by 2.5% on average by revamping distribution networks and methods following an assignment with Andersen Consulting. KF

have recently signed a long term deal with EDS predicated on the message of value and business benefit. They will clearly expect EDS to help them compete against ICA and regain their predominant position.

Sweden may be one of the most interesting battle grounds on which this new "value war" is fought.

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Company Profile

A Publication from INPUT's Business Integration Programme – Europe

May 1995

Groupe Bull Produce Strong Operational Turnaround in 1994

Nineteen ninety four saw Groupe Bull produce positive operating figures for the first time since 1989. The company had consolidated revenues of FF29.9bn (\$5.4bn) which represents 7.9% growth over 1993 (adjusted for structural changes and foreign currency fluctuations).

The return to growth at the overall group level is the result of an extremely strong performance in what Bull characterise their *growth businesses* (including systems integration and professional services) and has compensated for continuing decline in their *basic businesses* (enterprise servers and maintenance revenues) which shrank by -8%.

This profile presents an overview of Bull's recently announced financial results and also focuses on:

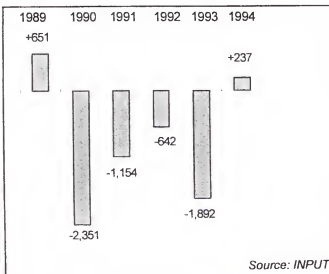
- Pre-privatisation restructuring initiatives
- Concentrated efforts to become a leading European Systems Integration vendor.

Greatly Improved Performance in 1994

Bull's return to growth follows four years of red figures in which revenues declined on average 9% per year as shown in Exhibit 1.

Exhibit 1

Groupe Bull Operating Results (FFm) 1989-1994

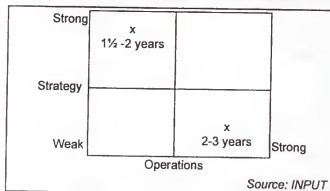


Under the leadership of ex-McKinsey partner, Jean-Marie Descarpentries, appointed Chairman in October 1993, there has been a high degree of focus on operational turnaround over the last 18 months.

Descarpentries' view, as expressed in Exhibit 2, is that operationally weak organisations, as he found Bull to be, take one and a half to two years to turnaround. Bull state that they are ahead of schedule in this process.

Exhibit 2

Jean-Marie Descarpentries' Vision of Company Turnaround Timescales



Bull claim that the two main reasons for the recovery are through a "mobilisation" of all Bull employees and through the prioritisation of a set of actions points:

- Growth in revenue
- Close attention to and reduction of "fixed" non-salary costs

- Improvement of salary costs/revenue ratios.

Bull's view is that their achieved salary savings are greater than those they have observed in the recoveries of other IS companies.

Bull has benefited from slowly improving macro economic conditions. Evidence of this increasing pick up across Europe was shown by the stronger second half performance of the group in 1994. Second half improvement was FF1.3bn, which was double the first half improvement.

Bull basic businesses, although suffering from declining revenues contributed FF400m to the group's operating results through major cost reductions.

The growth business (Open Systems and Software, Personal Computers, Systems Integration and Services, Systems Operations, Emerging Technologies, Manufacturing, Logistics and Purchasing) progressed in overall terms by 23% and now account for 52% of group revenues. This is up from 23% the previous year. Bull plan that this will rise to 65% within two years.

Bull's overall revenue growth goal for 1995 is 21%.

Exhibit 3 provides an overview of Bull's performance and strategic evolution over 1993/1994.

Groupe Bull 1993/1994 Performance and Strategic Evolution

	Revenue	Operating Result	% Operating Result/Revenue	Strategic Aim
Basic Businesses	-8%	+400 FFm	+4.4 points	Consolidation with good productivity
Growth Businesses	+23%	+1470 FFm	+15.6 points	Accelerated growth and recovery
Corporate	-	+259 FFm	Cost cut in half	Streamlining
Group	+6%	2129 FFm	+7.5 points	Growth and profitability

Source: INPUT

Restructuring Initiatives Complete

The other major reason for the healthier year has been Bull's organisational restructuring. The underlying principles of Bull's new operational structure are:

- A dual division/sales network consisting of 7 worldwide divisions and 4 geographical networks
- Three corporate functional roles supporting the above structure. These are focused on people (organisation and internal shareholding), businesses (industrial partners), and finance (financial partners)
- Maximum decentralisation
- Performance evaluation of all top executives by benchmarking group performance against industry leaders.

Descarpentries, who was responsible for turning around food packager CarnaudMetalbox in 1991 and who had no direct background in the IT industry, dismantled the old organisation within his first 90 days in office and subsequently placed the group "under tension".

Bull believe that the restructuring is now over and that the companies' thinking is presently orientated towards ongoing and further development.

These views were echoed recently from an external source, Peter Bonfield of ICL who stated that he believed that Groupe Bull was further down the road to recovery than some commentators thought.

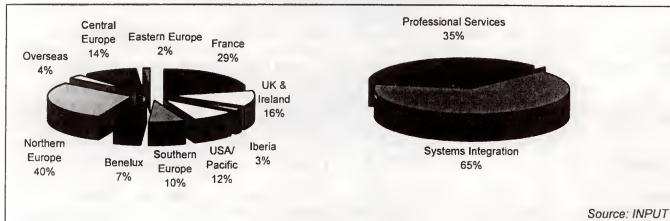
Aggressive Drive into Systems Integration

Bull's Systems Integration & Services (SIS) division was officially formed in 1993, although clearly Bull had previously been offering professional services and system development services.

1994 saw SI&S produce 13% of total turnover (FF3.7bn). Exhibit 4 details the split within SI&S of Systems Integration and Professional Services and a geographical analysis of the groups revenues.

Exhibit 4

Groupe Bull
Systems Integration and Services (SI&S) 1994 Revenues Split
by Delivery Mode and Geography



Source: INPUT

Bull has aggressively driven into systems integration over the last two years, seeing it as one of the key strategic areas of competition in the overall information services industry.

Bull's strategy for SI&S is to be a leading European systems integrator, this is being pursued through two main lines of action:

- Leveraging expertise across the global organisation
- Strengthening the implementation of programme management methodologies and processes.

Leveraging expertise is being achieved through building on "repeatable solutions" in local government, hospital management systems and through replicating common approaches to major projects.

Bull are also focusing on key horizontal competencies - i.e. business process automation, enterprise management systems based on SAP and Oracle, and distributed systems management via ISM (Integrated Systems Management). ISM is now being

marketed by a number of other organisations including Sema, and France Telecom.

Bull are positioning themselves as a *technology integrator* and are at the same time not attempting to deliver a distinct consulting operation in the way that EDS are currently attempting to do. Rather consultants are being placed in customer facing sales and marketing roles enabling peer to peer conversation of major opportunities.

Bull have however strengthened their upstream consultancy capability, both through recruitment but also through partnering with the major consultancy vendors such as Andersen Consulting.

Strengthening of programme management methodology and process has focused on secure customer risk management, and ensuring profitable bid, implementation and delivery management.

Within SI&S worldwide orders grew in 1994 by 35%. Bull state that pure Systems Integration growth, excluding Professional Services in Europe was of the order of 58%. Including Professional Services revenues grew 27%. Thirty seven per cent of SI&S revenues in 1994 are backlog.

Bull see little definitional distinction between Systems Integration and Outsourcing, stating that SI is "partial outsourcing anyway" and subsequently George McNeil, President of SI&S is now also responsible for Bull's Outsourcing operation, recently renamed Integris. Thirty per cent of Integris outsourcing contracts have already delivered significant SI projects according to Bull.

Major Contract Wins and Rollouts

Major contracts that Bull have rolled out in 1994 include a \$15m interbank country-wide clearing network for the Hungarian Giro, the British Army worldwide infrastructure project, UNICOM, which in total is a \$100m contract, a customer billing system jointly developed with Andersen Consulting for Deutsche Telecom. Significant contract wins include a worldwide messaging and data transmission system for the international airline consortium SITA (built on a Sequent platform), a \$11.5m mobile messaging system for Telia, the Swedish PPT, and a reengineering project of Birmingham City Council's social benefits claim processing system in the U.K..

Privatisation and Beyond

With the recent announcement of a new ownership structure, Bull appear to have reached a period of financial and strategic resolution.

NEC and France Telecom will both hold 17% of Bull's stock, Motorola 10%, Dai Nippon and IPC, the Singaporean company, will both have 4%; IBM will have just under 2% and Bull employees will hold between 5% and 10%. It is planned that Motorola will up their stake to 17% within two years.

At an operational and financial level Groupe therefore Bull are clearly in significantly better shape than three years ago. However, the obvious question remains that whilst Bull are gaining good margins in declining sectors in the more dynamic growth sectors they are, by their own admission not yet achieving acceptable margins.

Bull's gross margin improved by FF150m in 1994, despite the move towards activities with lower margins.

George McNeil sees that the industry is presently in a "state of mutation" and that, with no long term strategy to stay purely in enterprise servers and customers services, Bull are one of number of companies in the forefront of a period of transition in which long-term, robust, and profitable strategic visions are formulated.

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Company Profile

A Publication from INPUT's Business Integration Programme – Europe

March 1995

Input using

Syseca — Growing Outside Traditional Markets

Syseca, part of the French industrial giant Thomson-CSF, is the 13th largest player in the overall European Business Integration (BI) market, see Exhibit 1.

As such it stands incongruously amongst a host of much better known and higher profile service companies such as Cap Gemini Sogeti, Siemens Nixdorf and Olivetti.

Recognising this fact Syseca have over the last month 18 months begun an aggressive period of expansion, attempting to:

- Consolidate its position in its traditional marketplaces
- Enhance its presence internationally
- Compete more aggressively in commercial markets
- Increase systems integration revenues from outside of the Thomson Group

INPUT estimate that captive revenues presently account for 35% of total turnover.

Syseca was founded in 1966 and in 1975 became a wholly owned subsidiary of Thomson-CSF, the third largest worldwide electronics group in non-consumer markets.

Syseca positions itself as a major player in systems integration, software engineering and ADA software, as well as a benchmark among suppliers of mission critical systems.

In particular it sees itself as a world leader in command and control systems in the transportation sector and in message switching in civil aviation. In Europe it claims leadership in message-handling and in France it sees itself as the top specialist defence supplier.

Its strategy is to:

- Offer a complete service in systems with high software content
- Cover the systems lifecycle from consultancy to maintenance
- Develop technology to support its system integration and software engineering role.

Exhibit 1

**European Business Integration
Market 1994**

Rank	Company	Revenues (\$m)	Market Share (%)
1	IBM	2120	5.9
2	CGS	1305	3.7
3	DEC	1040	2.9
4	SNI	1020	2.9
5	AC	845	2.4
6	Finsiel	655	1.8
7	ICL	590	1.7
8	Sema	575	1.6
9	Olivetti	500	1.4
10	Oracle	330	0.9
11	EDS	310	0.9
12	Bull	305	0.9
13	Sysec	290	0.8
14	AT&T	285	0.8
15	Unisys	280	0.8
16	Reuters	255	0.7
17	Intergraph	255	0.7
18	Logica	240	0.7
19	HP	230	0.6
20	BSO	210	0.6
Top 20 Vendors		11,640	32
Total Market		37,700	100

Source: INPUT

Developing New Service Lines

Sysec has traditionally been recognised for its core competencies in areas such as defence related software engineering for control and command systems, management and telecommunications systems.

However, it has become acutely aware of the need to expand outside of these historical domains due to the commercial pressures it has faced as a result of the decline in defence spending over the last five years.

Consequently it has attempted to leverage its skill sets into complementary vertical markets such as transportation, utilities, and public telecommunications.

Exhibit 2

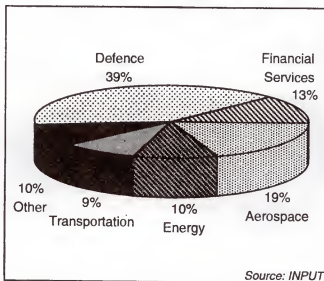
Revenue Analysis by Market


Exhibit 2 provides an analysis of the broader market vision Sysec have pursued since 1993. Defence-related revenues, although still representing a major part of Sysec's business, have fallen from around 53% to 40% of total revenues.

Exhibit 3

Syseca Five-Year Financial Summary (FF Millions) and Headcount

Year	1989	1990	1991	1992	1993
Revenues	916	1057	1298	1596	1814
Annual Growth Rate (%)	—	15	23	23	14
International Revenue (IR)	91.6	158.6	298.5	446.9	616.76
IR as % of Total Revenues	10	15	25	28	34
Staff Numbers – France	1700	1885	1903	2028	1980
Staff Numbers – International	0	15	447	572	732
Total	1700	1900	2350	2600	2712

*Source: INPUT***Targeting International Growth**

One of the major planks of Syseca's growth in the last two years has been an expansion into international markets.

Exhibit 3 details Syseca's financial results and headcount in the period 1989 - 1993 and highlights the very real success the company has had outside of its home market.

This success has primarily been built upon major contract wins in the utilities and transportation sectors.

1994 saw Syseca close a deal with the Russian utility, Gazprom, worth FF720m (\$120m) for a gas transport system. This contract, which Syseca stated was the largest they had ever won, and claimed was the largest ever won by a French software house, was undoubtedly a highly significant turning point in the company's fortunes.

Not only does it guarantee a healthy revenue stream until 1996, but it marked Syseca out as a player on the international prime contractor stage in competitions with EDS, CSC, and CGS.

The Gazprom contract also includes a long-term continuation clause for possible future network systems management, which would provide significant on-going revenues.

The Gazprom contract was aided by Syseca's reference site expertise at the French gas utility, Gaz de France, where it has for some time been performing similar integration and management activities.

The other major recent success story for Syseca has been in the transportation industry and particularly in developing control systems for underground trains.

Syseca have a world leadership position in control system development for underground trains, or metros, having been active in this marketplace since 1968 and have installed systems in Los Angeles, Washington, Baltimore, Mexico, Caracas, Singapore and Montreal.

Above ground Syseca have built on the strength of their long-standing relationship with SNCF and this led to Syseca winning the contract with Eurotunnel to develop and manage the channel tunnel rail traffic

supervision system. In the consulting arena Syseca have developed a strong relationship base with the French automobile community, and have performed technical audits and systems development for Renault and technology selection exercises for Renault and Peugeot.

International expansion has also been facilitated through a systems integration joint venture with Ferranti targeting the energy sector, and the continuing successful growth

of the UK software and consulting company Alslys. Thomson have recently merged Alslys' operations with another subsidiary, the US mainframe 4GL developer Must, with the intention of increasing its presence in international software markets. This new operation, still being run under Syseca's control, will be called Thomson Software Products.

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Company Profile

A Publication from INPUT's Business Integration Programme – Europe

April 1995

Andersen Consulting Reorganise European Operations Whilst Producing 13% Growth in 1994

Andersen Consulting has strengthened its position as one of Europe's leading vendors of *Business Integration* services, announcing recently that its European revenues rose 13% to \$1,142m in 1994.

In the light of Andersen's comment that 1994 was "not a wonderful year of opportunity in Europe" and its eight per cent decline in 1993, 13% growth represents a healthy performance for the year to December 31.

This growth was also achieved at the same time as Andersen was undergoing a significant internal reorganisation.

This profile presents details of Andersen's latest financial results and restructuring and also focuses on the:

- development of a Change Management capability
- establishment of a discrete Process Management Unit

Financial Services Division Drives Growth

Exhibit I presents Andersen's financial performance in Europe over the last five years. Andersen's European practice now represents 33% of its global management and technology consulting operation.

Exhibit 1

Andersen Europe Revenues 1990-1994 (\$m)

	1994	% Increase	1993	% Increase	1992	% Increase	1991	% Increase	1990	% Increase
Andersen Europe	1,142	13	1,043	(8)	1,130	19	949	23	770	50

Source: INPUT

Andersen's financial services division performed particularly strongly in 1994, growing over 35% and now accounts for 37% of overall European revenues. Andersen have benefited from their on-going relationships with the London Stock Exchange and Barclays Bank in the United Kingdom, the Banca Nazionale dell'Agricoltura in Italy and Caja Espana in Spain.

The other two areas which have been instrumental in driving Andersen's growth have been the telecommunication and utilities sectors.

In utilities the firm have been instrumental in major customer services projects for Thames Water and the Spanish group, ENDESA.

In telecommunications, Andersen has undertaken projects with France Telecom, Deutsche Telekom, Belgacom and Telekom Finland. Telecommunications related work expanded rapidly in 1994 and now produces \$56m in revenues for the European practice.

Organisational Structure Based on "Logical Groupings"

1994 saw Andersen undertake a major internal reorganisation, based primarily on the need to serve increasingly multi-national clients on a pan-European basis.

There were four key objectives behind the establishment of this new structure:

- **Critical Mass**
 - core skills in depth in defined markets
- **Accelerated Learning**
 - transfer of knowledge both internally and to clients
- **Interdependence**
 - building the Andersen *brand* to be more than the sum of the (local country offices) parts

- **Client Focus**
 - From Managing Partner downwards

Andersen has altered its focus away from geographies, instead concentrating on a *supply/demand* vision of its business and the challenges facing it.

The supply side consists of its core competencies. Andersen label these as:

- Change Management
- Process Management
- Strategy
- Technology

Consultants have core skills in one of the above and are then targeted at a "portfolio of clients" rather than a vertical market.

Andersen believe that 60-80% of core competencies are applicable across vertical markets. Consultants are therefore now organised around what the firm call "logical groupings" of clients, which in many cases cuts across traditional vertical markets. Logical groupings are the demand side of the equation.

Specific country market foci have been replaced with four regions within EMEA (Europe, Middle East, Africa, and India), run by Managing Partner, Europe, Vernon Ellis:

- West Europe (United Kingdom, Ireland, France, Scandinavia)
- South Europe (Italy, Spain, Portugal, Greece)
- Central Europe (Germany, Austria, *MittelEuropa*)
- Africa, Russia, Middle East, and all other territories

Exhibit 2

Evolution of Andersen's Internal Structure

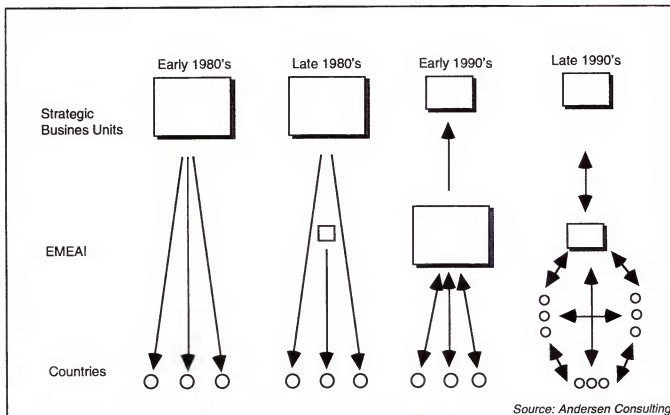


Exhibit 2 details the evolution of Andersen's structure over the last ten years.

Dynamics Altering Andersen and its Markets

Andersen believe there are two major drivers which are affecting the marketplace for systems consulting and development:

- An increased emphasis on value
- A continued growth in outsourcing

This, Andersen argue, is leading to the emergence of new value chains in the information services industry and the alterations of old value chains.

Perhaps the most significant of these changes is the one facing professional services and IT consulting itself.

Andersen believe that the future for these types of organisations is unclear and that the significant degrees of upheaval the IT professional services business has witnessed over the last two years (the convergence of services companies from different heritage's) is purely the beginning of a cycle of transition. These changes, Andersen state, have been a key driver of the reorganisation they have conducted over the past 18 months.

Andersen believe that the traditional professional services business model is under siege, and that time based costing which has been the dominant mode of delivery for all types of professional services for centuries is on the decline.

Already the market has witnessed a significant move to fixed priced costing. Now increasingly there is movement towards value based pricing.

Andersen's view is that service vendors must be able to demonstrate value greater than cost to clients and that if clients are unable to see this readily then they will not buy that service from that provider again.

Andersen's drive towards *Business Integration* is motivated by the aim of trying to identify and illustrate value for clients. They claim that all of their competencies in systems development and consulting lead to this goal.

However, Andersen recognise that value billing though an easy concept to understand and sell is a much more difficult one to deliver. Cost per unit will remain dominant for 80% of work for the foreseeable future, with a value element layered on top.

Importance of Change Management

Andersen's increasing emphasis on change management is a direct result of these developments. Change management, they argue, is a vital component in the process of creating and demonstrating value.

There has been a recognition that managing change is a "professional activity and one of the most expensive activities a company can do" and hence should not be tacked on as an afterthought to major systems development or integration.

Andersen state that 30% of total consulting revenues will derive from change management within 2/3 years.

They argue that their differentiation in change management is:

- Predictable measurable change
- Delivered success
- Discipline and facilitation
- Holistic approach (from strategy to implementation)

There are 150 people in Andersen's change management practice in the UK and 350 across Europe.

Process Management Growth

Andersen's Business Process management group, established in 1990, has now been made into an autonomous group under Mark Otway, and its major contract with BP Exploration has been extended for another five years.

Although admitting that their initial move into outsourcing was a defensive counter to Hoskyns and EDS, they now claim to have a significantly more proactive vision of this opportunity.

There are presently 600 people in the business process management group; this represents 5% of Andersen Consulting overall in Europe.

Andersen state clearly that they are not changing "outsourced" people into Andersen consultants and that they are not sending these type of staff to St. Charles, Andersen's legendary graduate trainee centre near Chicago. However, outsourced staff are put through change management induction programmes and are encouraged to start thinking of their ex-employers as clients.

Within six months they start to be evaluated through Andersen's in-house human resource programmes.

Other major deals Andersen's have in the Business Process Management arena include a joint venture with FIAT at their New Holland agricultural machinery plant. Andersen's now manage FIAT's \$400 million parts business for the whole of Europe.

These types of deals will become increasingly prevalent Andersen claim, and will, they argue, take them into new areas of operation.

In the United States, where Andersen now perform 60% of airline voucher reconciliation in conjunction with North West Airlines, Andersen are now, in their words, "part of the airline industry".

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Company Profile

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May 1994

Enterprise Systems in ICL— Focusing on Prime Contractorship and Consortium Management

Enterprise Systems is the specialist systems integration business unit within ICL. Since the industry-facing business units within ICL have the capabilities to manage the majority of projects relating to standard application areas within their target sectors, Enterprise Systems' emphasis tends to be on complex systems and projects with a strong multi-vendor perspective. Accordingly, Enterprise Systems has developed a strong project management capability and is experienced in managing consortia involving external suppliers.

To enhance its position in the systems integration market, Enterprise Systems:

- Specialises in integrating new technologies with IT
- Is endeavouring to extend its customer base outside the U.K.
- Offers a complete range of business integration services

Integrating New Technologies with IT

One consequence of the increasing acceptance of the concept of business re-engineering is that organisations are becoming more inclined to use advanced technology to achieve business benefit. Enterprise Systems is taking advantage of the growing integration of IT with other new technologies. The organisation has been the prime contractor for a number of projects of this type including the:

- Departure control system for the Channel Tunnel
- Bus tracking system for Centro
- Smart card information system for the Merseyside TEC

The Eurostar Departure Control System consists of three main components: automatic check-in gates, manual check-in desks and the terminal manager system. These components are connected

via a local area network, share file servers and are linked to the Eurostar reservation system. Dassault Automatismes et Telecommunications is responsible for the design and supply of the automatic check-in gates. The project is valued at £4 million.

Enterprise Systems is also the prime contractor responsible for the development of an integrated passenger information system for Centro in the West Midlands, U.K.. This system utilises navigational satellites to pinpoint the location of in-service buses. This information is then made available over a telephone enquiry service. Possible future extensions to the system include installing bus stop displays and linking traffic lights to the system to give priority to buses. This project is part of the DRIVE 2 programme funded by the European Commission.

Enterprise Systems was also responsible for the design and implementation of a smart card information system for the Merseyside TEC. This system assists students and colleges in the allocation of training courses.

In addition to the growing integration of IT with other advanced technologies, Enterprise Systems expect the nature of projects to change.

In particular, they expect a trend away from the systems integration delivery mode in favour of business operations contracts. One example of this trend is the London parking fine system and another is the U.K. national lottery system, where ICL is a member of one of the bidding consortia.

Extending the Customer Base Outside the U.K.

The revenue growth of Enterprise Systems in 1992 and 1993 is shown in Exhibit 1.

The ability of Enterprise Systems to maintain these high growth rates would be assisted by an increase in the proportion of revenues derived from outside the U.K.. Enterprise Systems has already been involved in several bids for global systems and has installed systems in France, Germany and the Netherlands, including a news transmission system for Deutsche Presse-Agentur.

Exhibit 1

Enterprise Systems: Financial Results

Year	Turnover (£m)	Turnover Growth (%)	Profit (£m)	Profit/Revenue (%)
1992	26	N/A	0.5	1.9
1993	38	46	1.7	4.5

Source: ICL

However, Enterprise Systems' major initiative outside the U.K. is the establishment of Far East Services. Far East Services provides offerings for the airline sector. In particular, it has developed an airline scheduling and control system designed to minimise delays to passengers. The principal elements of this system include:

- Aircraft schedule planning
- Aircraft routing and assignment
- Aircraft movement control
- Crew establishment planning

- Crew pairing and rostering
- Crew tracking

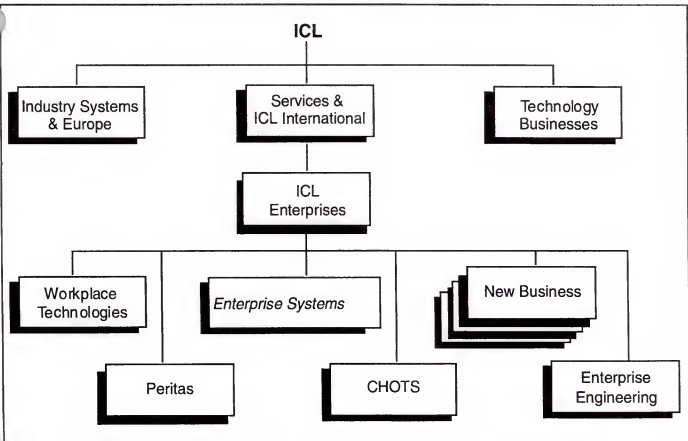
Clients for systems based on this development include Cathay Pacific, Taiwan Airways, Air New Zealand and SAA.

Offering Complete Range of Business Integration Services

Enterprise Systems is a business unit within ICL Enterprises. ICL Enterprises is the organisation within ICL responsible for business integration services. The structure of ICL Enterprises is shown in Exhibit 2.

Exhibit 2

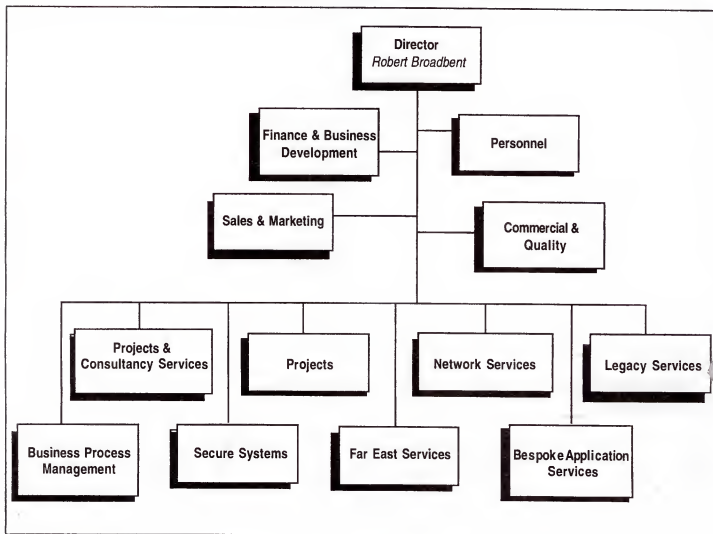
ICL Enterprises - Organisation Structure



Source: EnterpriseSystems

Exhibit 3

Enterprise Systems - Organisation Structure



Source: EnterpriseSystems

Enterprise Systems is responsible for the majority of business integration projects carried out by ICL Enterprises. However, any major projects that would dominate the revenues within Enterprise Systems, such as CHOTS, are established as separate business units within ICL Enterprises.

Exhibit 3 shows the structure of Enterprise Systems.

Enterprise Systems was formed in January 1994 from the merger of a

number of business units including two former business units within ICL Enterprises namely: C&TS and ICL Secure Systems. Enterprise Systems is registered to BS 5750/ISO 9001 and offers a complete range of business integration services including:

- Business consultancy
- Business process re-engineering
- Project management

Design and development

- Implementation
- Support and documentation services

Overall Enterprise Systems employs 300 office-based personnel and 200 teleworkers.

Enterprise Systems has approximately 25 personnel active in business process management, but does not view this activity as a significant source of major business integration projects.

In 1994, Enterprise Systems created an organisation to provide applications management for legacy systems. This unit, Legacy Services, provides

application maintenance and management of in-house systems. In particular, Legacy Services has been extensively involved in the provision of GUIs for existing mainframe-based applications.

Another area of expertise within Enterprise Systems is network integration. ICL Enterprises has developed a product called AccessManager that manages all of a user's access permissions to a range of applications from a single identifier such as a password or identity card.

Examples of business integration projects where Enterprise Systems acted as prime contractor are listed in Exhibit 4.

Exhibit 4

Project Examples

Client	Nature of Contract	Project Value (£m)
British Airports Authority	Flight information systems	2.4
Housing Corporation	Client/server based infrastructure	3.0
London Underground	Penalty fares administration	1.1
National Joint Utilities Group	Susiephone-streetworks information systems	N/A

Source: INPUT

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Company Profile

A Publication from INPUT's Business Integration Programme – Europe

June 1994

HP Assists the German Public Sector in Adjusting to New Economic Environment

In recent years, much of the public sector in Europe has come under growing pressure to improve the quality of its services while significantly reducing its expenditure. While the German public sector appeared to be relatively immune from these pressures, this is now beginning to change. In response to these changes in the economic environment, Hewlett-Packard is offering services to assist German public sector organisations in:

- Developing Government-specific solutions and concepts.
- Implementing improved office automation, workflow and document management systems
- Developing their IS strategies and IT infrastructures
- Integrating client/server solutions into existing mainframe infrastructures

Providing Consulting in Government-specific Solutions and Concepts

HP views its role as being the prime contractor to public sector organisations particularly federal institutions, state bodies and defence/security entities. Accordingly HP offers a range of services covering the complete project life cycle from consulting and planning through project management to implementation and training.

HP uses workshops to assist managers in identifying the most appropriate processes. HP does not provide its own application software products for the public sector, but partners with leading software products vendors, specialising in products for the public sector. The company assists government departments and local authorities in selecting and integrating the most appropriate software products to meet their organisational need. For example,

Exhibit 1

HP PSO Public Sector Division

North/East	West	Central	South	Security
Hannover (Hamburg) Berlin	Ratingen	Bad Homburg (Bonn)	Böblingen Leipzig (Munich)	Bad Homburg

Source: INPUT

HP personnel are implementing a client/server based public accounting system which will cover 40 locations and 2500 users for the Ministry of Finance.

HP employs 45 professionals - project managers, senior consultants, and project engineers - dedicated to the public sector. A number of these personnel were formerly employed within the public sector and have expertise in topics such as public sector accounting and registration systems.

These staff are supported by a further 300 personnel within HP's Professional Services Organisation (PSO). The Public Sector division within PSO is organised into a number of regional groups as shown in Exhibit 1.

Implementing Office Automation and Workflow Systems

Hewlett-Packard provides management consulting services, including workshops, to assist organisations in designing their processes.

Workflow, documentation management and office automation have become critical applications in the public sector as organisations here seek to streamline

their administrative processes. With the introduction of these technologies, the potential of IT to assist public sector organisations in improving the effectiveness and efficiency of their business processes has increased significantly.

HP has been involved in a number of major office automation projects including the development of a major office automation infrastructure for the Ministry of Transport. This project commenced in 1989 and involved providing word processing, spreadsheet, and E-mail facilities to approximately 600 users via a client/server infrastructure containing 32 servers linked to existing mainframe systems. Subsequently this project is being extended to incorporate workflow automation.

HP has access to a broad range of leading workflow products. Around these products, the company is building up associated capabilities in consulting, implementation and support skills.

Developing IT Strategies and Infrastructures

One of HP's strengths is in assisting organisations in planning the IT

infrastructure necessary to support their new processes. Typically this involves assisting clients in building a client/server-based, user-oriented infrastructure that can be integrated with existing mainframe systems.

In addition to assisting users in planning their equipment requirements, HP assists clients in other key areas such as their choice of database and in developing their system and network management infrastructure. Because of the scarcity of skills in the systems management of client/server architectures, HP will also undertake the ongoing systems and network management if required.

HP is currently involved in the implementation of a number of major client/server projects within the public sector. For example, HP is assisting the Ministry of Education in Stuttgart in planning and developing a client/server infrastructure integrating 52 locations within Baden-Wurtemberg. The establishment of appropriate standards for operating systems, networking and applications is an important feature of this project.

Integrating Client/Server Solutions into Existing Mainframe Infrastructures

There is a growing need for government departments to integrate client/server based solutions into the organisation's existing IT framework. At present many of the current IT infrastructures within the government sector are heavily dependent on mainframe based systems.

Rather than replacing these mainframes completely, it is more probable that new applications will be developed alongside existing mainframe systems. These new client/server based solutions will need to share access and information with the earlier IT environment. HP has a number of connectivity products to assist organisations in meeting this objective together with experience in undertaking this kind of project.

For example, HP have assisted the ministry of defence in assembling a highly secure IT infrastructure that involved integrating additional client/server based applications with the existing mainframes and wide area network.

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- **Product/service opportunities**
- **Customer satisfaction levels**
- **Competitive positioning**
- **Acquisition targets**

For Buyers—evaluate:

- **Specific vendor capabilities**
- **Outsourcing options**
- **Systems plans**
- **Peer position**

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Company Profile

A Publication from INPUT's Business Integration Programme – Europe

September 1994

Coopers & Lybrand Abandons Vertical Market Focus

Vic Luck, head of Coopers & Lybrand's consultancy business since April, has recently announced a restructuring which attempts to position Coopers' IT practice as a leading provider of strategic consultancy, financial control and project management in the large project/systems integration market.

Vic Luck has abandoned the three year old "matrix" structure of consultants being aligned either to a vertical market group or a "central pool" of technologists. Consultants will now group in smaller "cells", for personnel and management purposes, within one single division and the cultural constraints of being an IT consultant in the financial services division or the energy division will be lost.

This movement away from vertical market focus will be reinforced internally by an increased emphasis on networking and knowledge sharing amongst all parts of the business. The exclusive ownership of information and knowledge will be frowned upon, and the practice of partners loading their own consultants on an assignment, irrespective of their suitability in comparison

with consultants from other parts of the business will be monitored and policed.

The main thrust of the new structure will be a move to "direct access to market" and an associated movement away from the traditional reliance on IT consulting opportunities being generated by non IT divisions and other parts of the business, for example the financial services or retail division or the audit practice.

Drivers of Change

The reasons for these changes result from a belief that Coopers' IT consulting practice was falling between two stools; failing as, and to be seen as, a centre of technical expertise in the business consultancy market, and failing to gain critical mass in vertical markets offering high volume consulting business.

Coopers has never claimed leadership as a high tech consultancy but it has recognised that it increasingly faces the need to bring on board people who understand the business issues, impact and implication of emerging technologies such as object orientation, if it is not to be swept away on a sea of technology

and the commercial applications of technology that it does not understand. In tandem it has recognised that this new positioning in the systems delivery and consulting value chain will be dependent on partners and consultants with credible operational experience able to market Coopers at senior management levels in competition with heavy hitters from the system integrators, the large hardware and software vendors, and strategy players such as McKinsey. Recruiting and retaining people with this experience is one of Coopers most pressing issues and the way in which it is handled will be of key importance over the medium term.

The firm is also adopting a more aggressive attitude to the branding and marketing of a distinct IT capability, in an attempt to counter and expand the perception of Coopers & Lybrand as being purely a firm of accountants. A number of initiatives are in place which will see the firm adopting a higher profile in the industry and the media. In this respect Coopers will aim to compete directly with Andersen Consulting who have over recent years taken a significantly more proactive approach to marketing, including television advertising.

These changes are being driven by Stuart Senior, the former head of the Business Systems & Technology division, who has been given a without portfolio role ranging across the whole of MCS to create, brand, and market a single systems practice.

The Threat from Andersen Consulting

Vic Luck, formerly head of the Commerce and Industry consultancy division, has been instrumental in driving and focusing

restructuring against a backdrop of recession, falling revenues, reduced profitability and most significantly a position of market leadership being eroded and then surpassed by Andersen Consulting.

That Andersen Consulting has grown, prospered and achieved a position of dominance in systems delivery over the last five years and in the same market conditions which Coopers have found so difficult has had a profound effect on Coopers. Whether to stand and try and tough it out on the same ground, whether to withdraw altogether from head on competition, whether to partner with them on specific opportunities, whether and how to differentiate the Coopers offering from Andersen Consulting's have all been issues that have exercised much management time and energy.

Fees, Markets and Delivery Mode

Exhibit 1 shows C&L's consultancy fee income over the last six years. The 1993/94 figure represents 22% of the firms overall results; the largest fee proportion being Accounting and Audit which represents 43% (£237m).

Although no official or formal analysis is made by Coopers & Lybrand of fee income by type or sector IT consulting work is estimated to represent 60% of total consultancy fees equalling £74.4m. Exhibit 2 shows further informal analysis suggesting that consulting work can be subclassified as follows;

Exhibit 1

**Coopers & Lybrand's
U.K. Consultancy Fee Income (£M) 1988-1994**

1988/89	1989/90	1990/91	1991/92	1992/93	1993/94
129.4	155.1	155.8	141.0	124.0	124.0

Source: INPUT

Exhibit 2

1993 Consulting Revenues by Delivery Mode

	£M	Percent
IT Strategy Studies	12.4	10
Specialised Technical Advice	99.2	80
System Development	12.4	10

Source: INPUT

Exhibit 3

1993 Consulting Revenues by Vertical Market

	£M	Percent
Government/Public Sector	16	19.8
Financial Organisations	18	22.3
Industry/Manufacturing	25	31
Retail	20	24.8
Other	21	26

Source: INPUT

Exhibit 3 shows the split of IT consulting across market sectors.

Unisys Joint Venture Model Prospers

The other dimension to these new approaches to the marketplace has been an increasing effort in the area of joint venturing and partnership based solutions delivery. The RAF Logistics (LITS) contract, recently won in conjunction with IBM and ASK and in direct

competition with Andersen Consulting, is a good example of the type of model Coopers will increasingly look to exploit. This follows on from the work being performed on the MOD CHOTS project, where ICL is the lead partner, and also from many projects in partnership with Unisys. The Unisys connection has been strengthened in recent months by Vic Luck's predecessor, Malcolm Coster, taking the worldwide number three chair at Unisys as head of the Europe and Africa Division.

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Company Profile

A Publication from INPUT's Business Integration Programme – Europe

September 1994

IBB—Assisting German Manufacturing Industry in Cost Reduction

In Germany, IBM has formed an outsourcing subsidiary named IBM Systeme und Netze GmbH. This subsidiary is the equivalent of Axone in France, or IBM ISL in the UK, and is responsible for all of IBM Germany's internal information services, in addition to external outsourcing contracts and

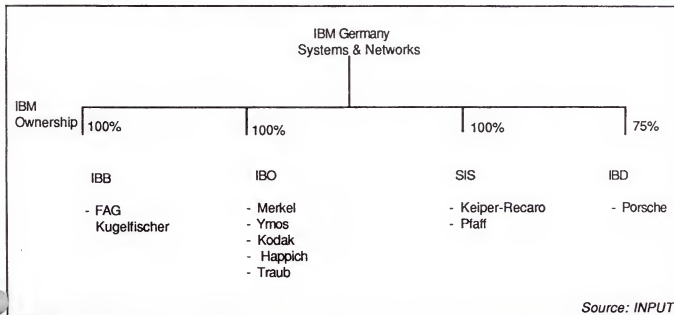
network service to internal and external customers.

However, the majority of these external contracts are managed from within several subsidiaries of IBM Systeme und Netze GmbH. These subsidiaries are indicated in Exhibit 1.

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Exhibit 1

Organisation Structure: IBM Systeme und Netze GmbH



At 1st March 1994, these subsidiaries managed between them a total of twelve external outsourcing contracts. These contracts accrued fiscal 1993 revenues of approximately DM47 million. However the 1994 revenues from these contracts will be a significantly higher, since all of IBO's six contracts have been awarded since August 1993 and SIS was only founded on 1st January 1994.

Each of these subsidiaries is 100% owned by IBM Systeme und Netze, with the exception of IBD, a joint venture in which Porsche has a 75% shareholding.

IBB is currently the largest of these subsidiaries, with 240 personnel. IBB, like its fellow subsidiaries, is targeting significant growth in the German outsourcing market over the next few years. IBB will continue to focus on the manufacturing sector, where the use of outsourcing will continue to grow strongly in Germany. IBB expects to develop its presence in the German manufacturing sector by:

- Developing its ability to provide business solutions for the manufacturing sector
- Offering business reengineering services to the manufacturing sector
- Expanding its contract base to non-IBM platforms.

Providing Business Solutions for the Manufacturing Sector

There is considerable ongoing demand for IT outsourcing within the German manufacturing industry as German manufacturers struggle to reduce their

costs to internationally competitive levels in the face of growing foreign competition.

Accordingly, most of IBM Systeme und Netze's current customer base are manufacturing companies. IBB's present customers are FAG Kugelfischer and several former FAG factories/manufacturing facilities which have been spun off to other buyer companies.

IBB offers a number of services specifically targeted at the manufacturing sector. These include:

- SAP outsourcing
- Technical information system outsourcing
- EDI

IBB's SAP outsourcing services include consulting, implementation and system management services for both R/2 and R/3 environments.

IBB also has the capability to assist manufacturing companies in planning, implementing and managing their technical information systems. Typically, these systems need to be linked to the SAP information system. Possible components of the technical information systems include CAD, for example Unigraphics, CAE, CAP, CAM and CAQ.

Offering Business Reengineering Services

At present, cost reduction seems to remain the principal driving force behind outsourcing in Germany.

However, business reengineering will need to be adopted by many German manufacturing companies in order for them to make the transition to lower cost business processes. FAG Kugelfischer has undergone an extensive reengineering exercise and is now returning to profitability.

Exhibit 2 illustrates the type of reorganisation that many companies will need to undergo to achieve maximum levels of efficiency and reduce customer lead times.

Information technology has an important contribution to make to company reengineering. IBB believes that German manufacturing companies are increasingly prepared to approach reengineering by choosing suitable standard application software products and then amending their business processes to match the software selected.

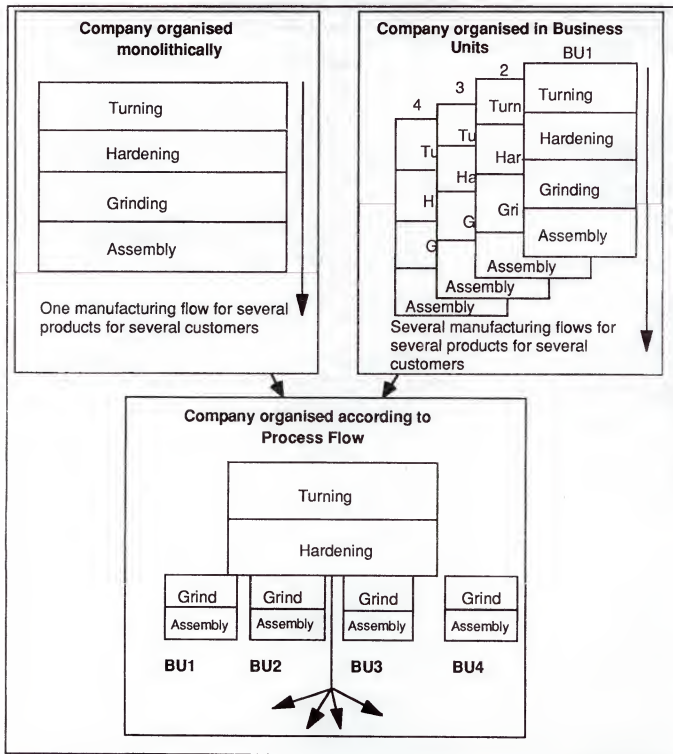
In particular, the R/3 product is being heavily promoted by SAP as a vehicle for assisting manufacturing companies in reorganising their production operations.

Expanding to NON-IBM Platforms

IBB has the capabilities to conduct system and network management across mainframe, desktop and client/server environments, and is experienced in the management of proprietary architectures from Bull, SNI and Digital in addition to those from IBM. IBB's services and solutions for the manufacturing sector are independent of equipment platform and operating system and IBB expects a significant part of its growth to come from outside the traditional IBM customer base as manufacturing organisations migrate from proprietary platforms into open systems environments.

Exhibit 2

Example of BPR in Manufacturing Sector



Source: INPUT

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Company Profile

A Publication from INPUT's Business Integration Programme – Europe

October 1994

iABG Aims to Diversify from its Defense Activities

iABG (Industrie-Anlagen-Betriebsgesellschaft GmbH) was founded by the German Ministry of Defense in 1961. The company was originally responsible for the operation of a central testing facility supporting the government's aeronautics and space programmes.

However, since its privatisation, iABG has become dependent for its future success on its ability to diversify into other areas of government and the wider commercial sector. To achieve this aim, iABG:

- Has entered into a partnership with BDM
- Is targeting office automation and workflow management
- Will enhance its business reengineering capability.

Partnership with BDM

BDM is a U.S. based company with a similar background to iABG. BDM was founded in 1960, and until the early 1980's was largely dependent on the U.S. Department of Defense. However, BDM began to diversify in the 1980s and iABG is depending on BDM to provide the entrepreneurial leadership that will enable iABG to prosper after privatisation.

BDM views iABG as a key vehicle in expanding its European presence. Consequently, BDM has acquired 45% of the capital of iABG and has appointed a managing director with a brief to turn iABG into a competitive private enterprise. Expansion and diversification of business activities is a key aspect of this brief.

iABG employs approximately 320 personnel and its revenue history is shown in Exhibit 1.

Exhibit 1

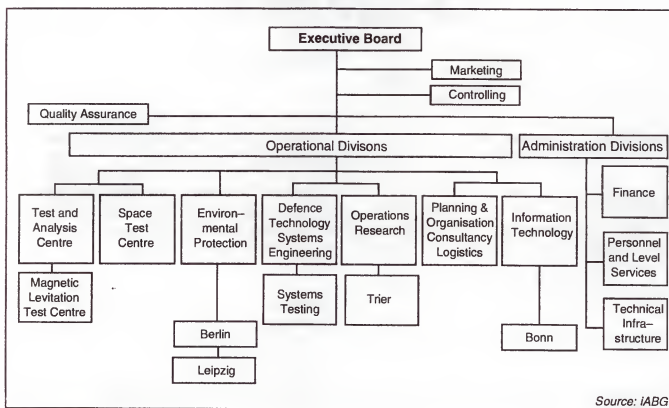
iABG Revenues

	1990	1991	1992	1993
Revenue (DM Millions)	279	287	324	325
Revenue growth (%)	(3)	3	13	0

Source: iABG

Exhibit 2

iABG—Organisational Structure



Source: iABG

Both BDM and iABG have a much wider scope of activity than IT-related services alone and offer a wide range of technical and scientific services. Approximately 200 of the 1500 personnel employed by iABG are involved in IT-related activities.

Exhibit 2 shows the structure of iABG in early 1994, identifying the principal activities of the company.

However, the new managing director of iABG has now re-organised the company into four operating divisions and is

endeavouring to build a company culture based on interconnecting project teams across disciplines, rather than autonomous departments.

The four principal areas of expertise within iABG are now:

- Technical analyses and tests
- Environmental protection
- Defense
- Planning, organisation consultancy and information technology.

Targeting Office Automation and Workflow Management

The IT Division within iABG was founded three years ago and has traditionally shown a strong technical bias. For example, iABG has been involved in the validation of ADA compilers and wrote the methodology behind the German contribution to Euromethod. iABG originally developed this methodology for the Federal Ministry of Defense and it was taken over by the Federal Ministry of the Interior on behalf of the civil public authorities in 1992.

iABG was one of the first organisations to achieve ISO 9001 accreditation for information technology in Germany, receiving accreditation in January 1993. iABG intends to use this experience by assisting public bodies in achieving ISO 9001 status. The company also has extensive expertise in IT security.

However, despite its high level of expertise in software technology, iABG has only limited capability to develop offerings for the non-defence sector.

One key area where the company is targeting the commercial sector is the discipline of office automation, especially workflow systems. For example, iABG has provided office automation consultancy to the German Ministry of Social Affairs and Health, assisting the organisation in identifying requirements and evaluating vendor offerings.

In addition, iABG has developed its own workflow product called ProMinand (Office Process Migration, Integration and Disposition). This system is being used by a large German bank to implement a personal credit information system, ultimately involving approximately a thousand workstations.

iABG is also becoming involved in medical systems via a project to implement optical storage of patient data.

Enhancing its Business Reengineering Capability

iABG is also targeting the systems integration market. One area of expertise is command and control systems and the company has been involved in managing a satellite communications project.

iABG is also active in the transportation sector. The company designed and implemented a fuel-handling system for Hamburg airport and has been involved in a systems integration project for Munich airport.

iABG is targeting Eastern Europe and is seeking to supply geographical information systems to the Ministry of Environmental Protection in Poland. The company has offices in Berlin and Leipzig.

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However, iABG needs to strengthen its system integration capability by adding business reengineering skills. To fill this

gap, the company is training existing staff and hiring consultants with three to four years, experience in this area.

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October 1994

Hewlett-Packard Increases Emphasis on Business Integration Services

Historically, Hewlett-Packard (HP) has maintained a low profile in business integration services compared to other leading equipment vendors such as Digital and IBM. This low profile has benefitted HP's relationship with professional services vendors. Many of these organisations have felt an added security in their dealings with HP, perceiving there to be no direct competition between themselves and HP.

However, HP will increase its presence in the business integration market in future. Recognising the increasing demand for equipment vendors to act as prime contractor, HP has formed a Solutions Integration Group to target business integration services. As a result, HP expects its relationship with professional services vendors to become a cooperative/competitive one with the appointment of the prime contractor being driven by customer preference, and with HP adopting either the prime contractor or sub-contractor role.

Key factors in HP's pursuit of business integration services are:

- The merger of HP's systems integration and professional services capabilities into the Solutions Integration Group
- HP's early focus on open systems and client/server technology
- The company's expanding vertical focus.

Formation of the Solutions Integration Group

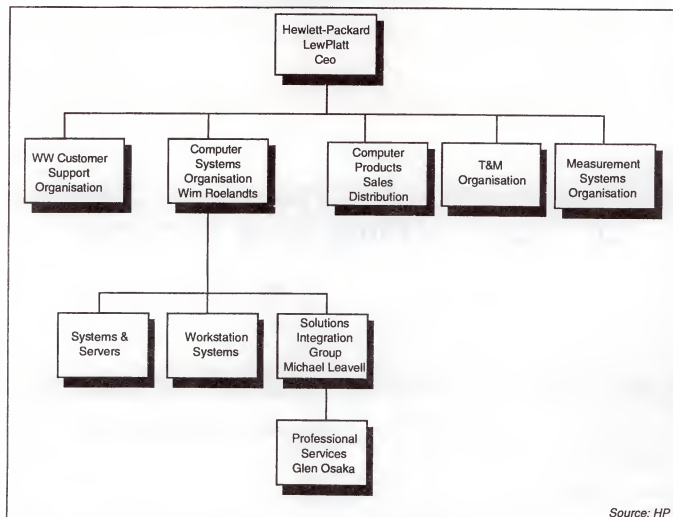
Exhibit 1 shows the organisation structure of HP.

HP's Professional Services Organisation (PSO) was formerly a division of HP's Customer Support Organisation, alongside the Response Centre Organisation and the Systems Support Organisation. However, PSO, as part of the Solutions Integration Group, is now part of the Computer Systems Organisation. This organisational change reflects the change in emphasis in the role of PSO from a support organisation to an important player in the provision of solutions and a major pre-sales resource.

The organisation structure of the Solutions Integration Group is shown in Exhibit 2.

Exhibit 1

HP Organisation Structure

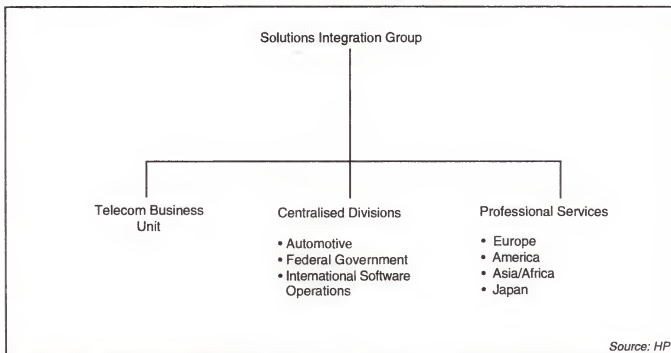


Source: HP

Globally, the Solutions Integration Group consists of centralised units and field operations. The centralised business units comprise entities focused on specific industry sectors and HP's international software operation that provides offshore resources from India. In addition to these centralised business units, there is a professional services field operation within each country computer systems organisation. For example, in Germany the PSO employs approximately 300 personnel. Worldwide, the Solutions Integration Group employs approximately

4,100 professionals. In 1994, the Solutions Integration Group expects to achieve worldwide revenues of \$900 million, including approximately \$300 million revenue in Europe. This figure includes HP's people-based billings together with any bought-in products and services. HP estimates that the total worldwide revenues of the Solutions Integration Group are approximately \$2 billion if all associated equipment and software product revenues are included. These figures represent a 30% growth over those for fiscal 1993.

Exhibit 2

Organisation Structure: Solutions Integration Group**Focus on Open systems and Client/Server Technology**

HP's current strength in business integration services is its ability to assist clients in adopting open systems-based client/server architectures.

The majority of HP's professional services revenues in Europe come from assisting clients in:

- Migrating from legacy systems to client/server computing
- Integrating client/server computing with legacy systems
- Developing new client/server computing environments.

The principal skill supplied by HP is client/server architecture planning and implementation expertise. Indeed HP is finding it hard to keep up with demand for

client/server architecture and implementation services and may need to consider the use of alliances or acquisitions to gain access to experienced technology consultants.

HP PSO's core services for assisting clients in migrating to open systems are:

- Requirements analysis
- Open IT workshops
- Project management
- Education
- Process change management
- Integration services
- IT architecture design and planning.

The Solutions Integration Group has 40 education centres worldwide. These centres play an important role in supporting HP's open systems and client/server initiatives. This includes a growing emphasis on multi-vendor-based, customised training.

This greater flexibility in the specification and delivery of training services assists HP in:

- Explaining to senior executives the business implications of adopting client/server environments
- Clarifying the practical implications of such adoption to the CIO
- Providing detailed skills needed by the client for implementing, managing and using a client/server environment.

Overall, HP made a major effort in 1993 to standardise its methodologies and establish repeatable processes. The company has already achieved ISO9000 certification in Germany, and expects PSO to have achieved certification throughout Europe by early 1995.

Increasing Industry Sector Focus

At the global level, the Solutions Integration Group has units targeting:

- Federal Government
- Telecommunications sector
- Automotive sector.

In Europe, HP has assisted Telia, the Swedish PTT, in moving to a client/server environment supporting 10,000 concurrent users. HP's services included workshops and migration services.

In addition to those sectors listed above, the Solutions Integration Group is targeting the

manufacturing and financial services sectors in Europe.

One element in this increasing industry sector focus is a growing emphasis on supporting standard application software packages. For example, HP is already building a global business based on supporting manufacturing organisations which are moving to SAP's R/3 product. HP also supports the implementation of applications software products from vendors targeting the manufacturing sector such as QAD and SSA.

In addition, HP has considerable experience in the use of test and measurement technologies. This capability, together with its communications knowledge, assists HP in developing solutions for the process manufacturing sector.

HP may consider using alliances or acquisitions to develop its services capability for the financial services sector.

HP does not currently offer business or functional strategy or business reengineering services. However, the company expects to introduce these in the coming year. HP's ability to generate large projects via use of strategy consultants is questionable. The company's present success is built upon its reputation of having strong technical understanding of the client/server environment. Furthermore, users are sceptical of the level of business understanding that can be attained by equipment vendors.

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Company Profile

A Publication from INPUT's Business Integration Programme – Europe

December 1994

Digital Consulting Disbanded

In August 1994 Digital disbanded the organisation responsible for its consultancy and systems integration activity, Digital Consulting, just six months after its formation. At the same time, the vice president responsible for Digital Consulting, Gresham Brebach, left the company together with a number of his senior managers. The new organisation, which distributes the components of Digital Consulting between a number of other business units comes into effect in January 1995.

This move is expected to considerably weaken Digital's presence in systems integration, and effectively ends the company's participation in management consulting.

In February 1994, Digital created a new global business unit called Digital Consulting. In addition to the profit and loss responsibility introduced in March, Digital Consulting became responsible for its own balance sheet.

In fiscal 1993, Digital Consulting realised revenues of approximately \$2.3 billion worldwide. Approximately \$800 million of revenues were earned in Europe.

In order to develop its market presence, Digital Consulting had:

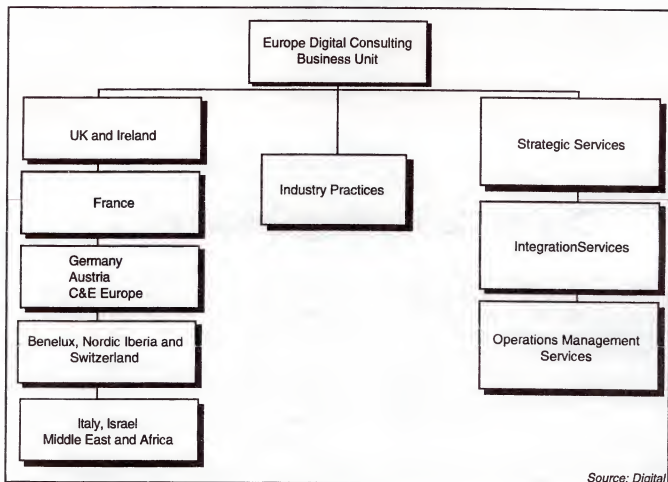
- Introduced the Consulting Services Principal role
- Focused on Strategic Services, Integration Services, and Operations Management Services
- Enhanced its industry focus.

Introduction of the Consulting Services Principal Role

The organisation structure of the former Digital Consulting in Europe is shown in Exhibit 1.

Exhibit 1

Organisation Structure Digital Consulting-Europe



Source: Digital

Within Europe, Digital Consulting employed approximately 6,000 personnel. The majority of these personnel were organised into geographically defined Professional Service Centres (PSCs), each of which had its own profit and loss responsibility. A PSC typically employed 100 - 200 personnel, and was responsible for the development of consultants and their assignment to projects.

Within each geographically based PSC, each consultant was intended to have either a practice or an industry sector specialisation. Globally, the Business Practices Groups were responsible for developing Digital Consulting's service offerings and disseminating practice knowledge. Similarly the global Industry

Practices Groups were designed to be responsible for the development of solutions for specific industry sectors.

Digital Consulting viewed its appointment of Consulting Services Principals (CSP's) as critical to its future success. CSP's were expected to play a role similar to that of partners in consultancies such as Andersen Consulting.

The CSP was expected to play a key role in business development by assisting in the building of long-term client relationships and in pro-actively developing service opportunities. The Consulting Services Principal was also intended to be ultimately responsible for client satisfaction and

engagement management within designated accounts. Digital Consulting appointed CSP's for its 450 leading accounts in Europe.

Focused on Strategic Services, Integration Services, and Operations Management Services

Digital Consulting was organised into three primary business practices:

- Strategic Services
- Integration Services
- Operations Management Services.

Exhibit 2 provides a breakdown of revenues by business practice.

Exhibit 2

Revenues by Business Practice, 1993

Business Practice	Worldwide Revenues (\$M)	Estimated European Revenues (\$M)
Strategic Services	300	100
Integration Services	1500	560
Operations Management Services	500	140
Total - Digital Consulting	2300	800

Source: INPUT

The Strategic Services practice aimed to assist clients in developing their business processes, technology strategies, organisational approaches and in-house skills. It covered a range of services within *Management and IT Consulting* together with *Learning Services*. Within the Strategic Services business

practice, there were five primary practice areas namely:

- Operations Effectiveness
- Business Transformation
- Information Technology Strategy
- Organisation Development
- Skills development.

The Operations Effectiveness practice addressed business process improvements. For example, it specialised in assisting manufacturers in improving the effectiveness and efficiency of their supply chains. Relevant expertise within the Operations Effectiveness practice included:

- Top mapping of business processes
- Implementing ISO 9000 quality standards
- Electronic commerce/EDI
- Concurrent engineering.

The Organisation Development practice provided consultancy and customised training courses to assist organisations in developing their working practices.

The Integration Services practice was the *solution provider* within Digital Consulting and was the largest of the three primary practices. The Integration Services practice provided three main types of service:

- Systems development and production systems support
- Systems integration
- Custom systems and components.

Integration Services had been assembling a portfolio of technology, functional and

industry solutions. Its technology/horizontal initiatives are listed in Exhibit 3.

Exhibit 3

Integration Services— Technology Initiatives

Initiative	Product/Service Offering
Client/server production systems	IT downsizing Rapid applications development
Workgroup and enduser computing	Workgroup/LinkWorks Document management
Applications integration	Information access & distribution Application frameworks
Enterprise network computing	Network computing Enterprise networks
Custom systems and components	Repackaged computer systems OEM design and manufacturing services Storage management & network devices

Source: INPUT

The overall emphasis within Integration Services had moved away from vertical applications towards the implementation of enterprise-wide, production, client/server environments. Digital Consulting had been investing in methodologies to assist in the project management of client/server based implementations.

Digital's capability in special component integration was of particular relevance to the company's activities in the telecommunications and defence sectors.

The Operations Management Services practice focused on providing services to assist clients in managing and running distributed IS infrastructures. The practice's principal service offerings are listed in Exhibit 4.

Exhibit 4

Operations Management Services Offerings

Targets	Service Offerings
Installed Digital base	Systems and network outsourcing
Client/server Multivendor systems	Remote system management Business protection services
Data networks	Operations consulting

Source: INPUT

Under the latest reorganisation:

- Computer Systems Division will acquire the Integration Services and IT Consulting
- Multivendor Customer Services will assume responsibility for Network Integration Services and Learning Services
- The Operations Management and Management Consulting Services will be combined with Digital's in-house information systems activity.

Enhanced Industry Focus

Overall, Digital's March reorganisations, in particular the abolition of the industry sector facing Customer Business Units, diminished the company's industry sector emphasis. However, Digital Consulting had retained some degree of industry focus through its Industry Practice units.

One of Digital Consulting's most successful areas was the telecommunications sector, in applications such as network management. Digital Consulting had also been successful in targeting the utilities and transportation sectors, particularly in Eastern Europe. For example, Digital recently won a \$20 million contract with Polish State Railways, to supply and install an Operational Management System.

Other key sectors for Digital Consulting were:

- Financial services - particularly the application of client/server architectures to large banking institutions
- Postal systems
- Pharmaceuticals - particularly R&D related applications.

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- Product/service opportunities
- Customer satisfaction levels
- Competitive positioning
- Acquisition targets

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- Outsourcing options
- Systems plans
- Peer position

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Company Profile

A Publication from INPUT's Business Integration Programme – Europe

December 1994

Computer Sciences Corporation Aims to be a Major Systems Integration Force in Europe

CSC has set its sights on becoming a major player in commercial systems integration, and has carefully selected and acquired firms that will help it achieve this goal.

CSC's strategy is built around strategic consulting provided by the Index Group and its solid federal project management skills.

The Index Group provides unique commercial consulting experience as well as access to a commercial client base - both capabilities that federal integrators generally lack.

Its string of carefully selected acquisitions provide it with the bridge necessary to convert federal experience and skills to the commercial market.

However, CSC has yet to reach a critical mass in Europe, and so further acquisitions in key European countries are required. CSC has, for example, just taken a substantial stake in Ploenzke, the Germany professional seminars firm.

CSC's industry coverage and application software product access may also need significant strengthening for the company to succeed in the European commercial systems integration market.

Currently, its strongest geographic presence is in the Benelux and the UK, and this is now supported by the Ploenzke acquisition in Germany.

Computer Sciences Corporation (CSC), founded in 1959, is one of the largest independent professional IT services company in the U.S.A.

CSC's objective is to become one of the top two or three companies in the commercial markets for professional services, systems integration and outsourcing in Europe as well as the United States.

It aims to maintain its dominant position in the U.S. federal market, and expand its share in non-federal markets through internal growth and acquisitions. Non-federal business

Its European operations are reported to be on the point of doubling their revenue as a result of recent major contracts, notably the \$1.5 billion outsourcing deal with British Aerospace.

Operations in Europe

CSC Europe provides the following services: Consulting, software development, systems integration services and outsourcing to national and transnational clients, primarily in Belgium, France, Germany, the Netherlands, and the UK

Headquartered in the UK, CSC has the following business units:

- Belgian Operations Division
- French Operations Division
- German Operations Division
- Netherlands Operations Division
- UK Operations Division
- Services Management Division (SMD).

The UK based SMD is responsible for outsourcing throughout the region, unlike the operations companies which have a country focus and a brief restricted to SI and professional services.

Due to new outsourcing contracts with a take over of personnel and recent acquisitions the number of employees will exceed 30,000 by the end of 1994.

Company Strategy

CSC's positioning is summed up in its 1992/93 Annual Report:

"Being the best at business re-engineering is a prerequisite to helping companies address the issue of competitiveness in a rapidly changing environment. Pre-eminence in the evaluation and application of technology is essential to leadership in systems integration and information processing outsourcing. Having the best project management skills is critical to success in the development and operation of complex information systems. So all three are required if we are to be the best at helping our clients get break-through results in the way they operate."

In the past CSC has used credibility and know-how built up in federal contracts to address U.S. commercial targets while keeping government business going. It has not been easy to effect the same sort of transfer across the Atlantic. CSC's European growth in the 1980's did not match the overall market growth.

CSC's current marketing strategy, based on the Index Group's strategic consulting programmes and business reengineering practice, seems to be proving more successful.

Market Analysis

Exhibit 1 provides analysis of revenue by business service categories.

Exhibit 1

Analysis of CSC World-Wide Revenues by Line of Business (\$ Millions)

Business Service	1993 Revenue	1994 Revenue	1994 Share
Professional Services, incl. Consulting and Business Re-engineering	901	1137	44%
Systems Integration	617	697	27%
Outsourcing	962	749	29%
Total	2,480	2,583	100%

Source: CSC

Exhibit 2 analyses CSC's revenues by market.

Exhibits 3 and 4 provide INPUT's estimates of CSC's European revenues by delivery mode and by country.

Exhibit 2

Analysis of CSC World-Wide Revenue by Market (\$Millions)

Market	1993 Revenue	1994 Revenue	1994 Share
Department of Defence	676	715	28%
NASA	261	222	9%
Civil Agencies	318	286	11%
Total Federal	1,255	1,223	48%
Commercial USA	990	1,039	40%
Commercial International	235	321	12%
Total Commercial	1,225	1,360	52%
Grand Total	2,450	2,583	100%

Source: CSC

Exhibit 3

Revenues by Delivery Mode, Software and Services, Europe CSC, 1994

Delivery Mode	Revenues (\$ Millions)	Share (%)
Application Software Products	5	2
Turnkey Systems	35	13
Professional Services	60	21
Systems Integration	20	7
Systems Operations	95	34
Processing Services	35	13
Total Software and Services	250	90
Equipment/Other Revenues	30	10
Total European Revenues	280	100

Source: INPUT

Exhibit 4

**Estimated Revenues by Country,
Information Services, Europe CSC,
1994**

Country	Revenues (\$Millions)	Share (%)
France	40	16
Germany	25	10
UK	88	35
Netherlands	23	9
Belgium/Luxembourg	75	30
Total Information Services	250	100

Source: INPUT

Acquisitions/Divestures

In August 1994, CSC announced the acquisition of Ouroumoff Consultants SA, a leading French management consulting firm.

Since December 1994 CSC holds 50% (plus one share) of the equity of the German professional services company Ploenzke AG (with an annual revenue of \$100 million and 1000 employees)

Company Profile

A Publication from INPUT's Business Integration Programme – Europe

December 1994

McKinsey — Views On Business Process Reengineering

McKinsey, the leading strategic management consultancy, who have traditionally been regarded as an “anti-technology” firm have recently begun stressing that the innovative use of Information Technology has now become a prerequisite of success.

McKinsey believe that successful companies will be those which create an environment of continuous organisational evolution and a constant exploration of leading edge technology.

Core Process Redesign

McKinsey is a proponent of Core Process Redesign, which it claims pre-dates CSC Index's development of BPR, but which is a similar management philosophy.

McKinsey's most fundamental quarrel with Business Process Redesign, as currently

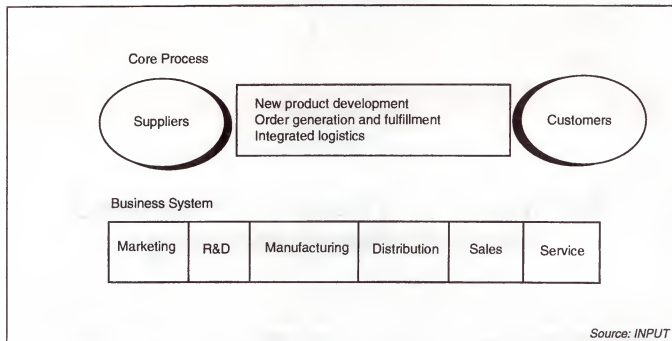
practised, is that it is offered as an occasional, bolt-on-initiative that a corporation will take from time to time to promote a step change in business performance.

McKinsey argue that in order to redesign a core process, a company or corporation first has to be able to identify it. The concept that corporate activities comprise a small number of global core processes can only be understood by taking a holistic and horizontal view of the company.

In order to do this, it is necessary to ignore traditional “value chain” or “business system” frameworks, which view a company as a sequence of functional activities, essentially as a set of interrelated departments. Core processes cut across functional, geographic, units and even company boundaries. These ideas are expressed graphically in Exhibit 1.

Exhibit 1.

Core Process Versus Business Views



Information Technology — A Key Enabler

McKinsey identifies information technology as a key enabler for making this transformation. Networked communications, relational databases and expert systems are among the many technological advances that allow greater co-ordination between formerly discrete activities. Information technology provides options for totally restructured work flows and decision making processes.

However, McKinsey observes that, over the last decade, the failure of computer technology to deliver proven bottom line value, as well as the highly visible nature of many over-ambitious systems disasters, has led top management to abandon the notion, developed in the 1980's, that IT can be used to gain competitive advantage. The recent emergence of Business Process Reengineering has reinforced this "Low Tech" focus. Recent cases and methodology manuals for BPR are studded with advice to "first

redesign the process, then find out if technology can add any further value".

This return to technophobia, says McKinsey, could be dramatically mis-timed. Recent case histories of BPR show that, especially in information intensive industries such as financial services, new approaches to redesign bring only incremental benefit, often of the order of 5% or less in productivity improvement, unless they tackle the issue of how to apply technology effectively.

Rebalancing Human and Machine Skills

McKinsey's analysis of historical IT investment is that failure to reconfigure human skills and organisational forms around IT has been as important as specific problems in implementation of IT.

Rebalancing human-machine interfaces has been proven to double or better clerical productivity and free front line administrative

employees for service and customer management in a wide range of industries from finance to equipment maintenance.

The role of IT in building individuals' skills may well prove to be the most valuable application of information technology so far discovered, says McKinsey. Effective redesign will increasingly depend on how well technology is harnessed to the different needs and different skill requirements of different core processes.

Parts of banks handling commercial credit, for example, will need high levels of individual skill, sophisticated on-line decision support and information access systems, and streamlined administrative processes that make the best use of skilled people's time.

The parts handling personal credit will need expert systems for credit scoring, automated work scheduling and administrative processes, and screen-based scripts to guide low-skilled operators through standard procedures.

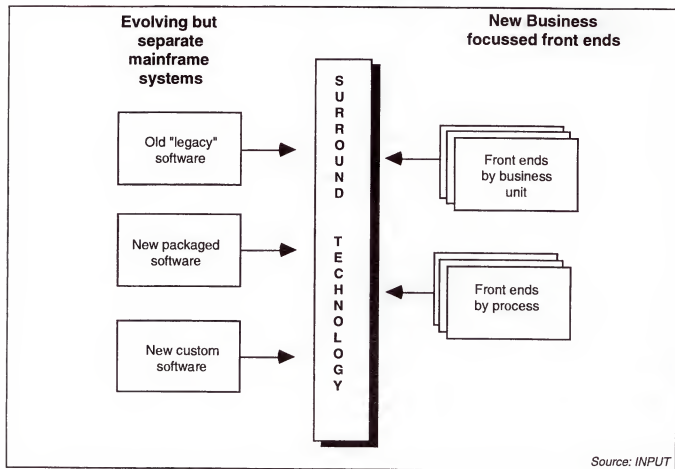
Accelerating the Payback: The Surround Approach to Old Technology

Important lessons can be learned from companies that have been able to achieve competitive gain through combining IT with innovative process redesign. In high profile cases such as American Airlines and Direct Line Insurance, the top executive managers have had a permanent and personal commitment to acquiring and using IT as a key corporate resource.

Drawing on techniques developed by telecommunications companies, "interfacing technologies" provide a "surrounding layer" between new and old technology. Investments on both sides of legacy and new systems can proceed at a different pace, and there is little pressure to take risks in the old environment when change can be supported in the new.

Exhibit 2

Interfacing Old and New Mainframe Technology in IT Architecture



A handful of retail banks, insurers and other customer-focused organisations have developed this concept (see Exhibit 2).

A major European bank has built a totally new, telephone-based bank on the back of the old software portfolio of its parent in less than nine months. Key to success was innovative use of an interfacing front-end software technology similar to the telecoms "surround" and establishing a totally new type of IT department on the user side of the front end.

When attempting to replace a large software portfolio piece by piece, a considerable amount of continuing effort is needed to build

"bridges" that link the new and old environments.

Surround technology avoids many of these problems, as the software helps with the bridge building. One financial institution that McKinsey has been working with has reduced its product development time to weeks, using this facility.

In McKinsey's opinion, probably the single greatest contributor to the present disenchantment with IT delivery has been the waste of money on huge "data and application architecture" projects. With a surround strategy, those back-end changes that are needed can be tackled as a slowed down and

carefully managed set of enhancements to existing architectures, or more radically, as is now practised in many financial institutions, through the addition of a separate back-end

system to handle the need for new functionality behind the common interfacing facilities of the "surround".

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Company Profile

A Publication from INPUT's Business Integration Programme – Europe

December 1994

BMS Bossard Business Process Reengineering

BMS Bossard is the UK subsidiary of Bossard Group, with about 30 consultants operating in the UK. Bossard Group is one of Europe's premier management consultancy firms, with headquarters in Paris and operations in 17 countries, employing over 1000 professional staff worldwide. It provides a full range of consultancy services including:

- Strategic management
- Organisation and process development
- Human resources management
- Information systems management.

The firm provides functional expertise in the areas of strategy, marketing, reengineering, human resources, communication and information systems.

Bossard Group characterises its service as:

- High quality service in all aspects of consultancy from diagnosis through to the full implementation of solutions

- Experience and capability to manage change
- Independence and objectivity that its clients demand from their professional advisers.

Bossard Group maintains that its international capability enables it to draw on a wide range of experience to address the specific requirements in individual markets.

Bossard Services in Reengineering

Bossard Groups focus is to assist its clients in gaining and sustaining a true competitive edge. It has developed a set of three core offers to enable them to meet successfully future challenges.

This includes:

- Customer orientation: focus on the value added to the customer
- Benchmarking: implement best practices

- Business process redesign and implementation: redevelop organisation and systems for better flexibility and improved cost effectiveness.

The firm's approach to business process redesign is to address issues through a strategic perspective and assist its clients, as required, up to the effective implementation of the new organisation.

It has developed a pragmatic approach to implementation, combining a number of inputs such as project management, information systems management, motivational communication, skills management, training, implementation monitoring.

Reengineering and IT Management

In the view of Bossard Group, IT is a key enabler to effectively implement a reengineered organisation. It expresses the exercise, is not just about designing and implementing a new system. It must be approached through a number of perspectives. Bossard Group has developed a specific methodology and a number of relevant tools in order to make the best use of IT as part of a reengineering process. Its primary focus is to:

- Redesign IT strategy in order to develop an up-to-date infrastructure able to support business challenges in the longer term and achieve better cost effectiveness
- Implement new development methodologies achieving shorter development cycles and better user involvement
- Redesign the processes through which information systems are developed and maintained to achieve better reactivity to business needs and reduce migration costs.

It has proved successful in a number of European top ranking firms across a wide range of industries, especially Retail, FMCG, Banking and Financial Services, Telecommunications and Health.

Typical Bossard Assignment

In a major UK insurance client, BMS Bossard has redesigned the vehicle claims process to shorten the compensation cycle and reduce the cost of the operation. The physical handling of claims, including visits of experts, has been reorganised to provide more effective client service and the IT support has been redesigned.

The project was completed within a 6-9 month period. A first phase concentrated on the process within the insurance company. The second phase extended the coverage of the process to include outside resources, such as repairers and assessors. The appointment of approved repairers was one outcome of this, which simplified and shortened the claims process.

Performance gains achieved include elapsed times reduced by 50% and costs by 15-20%.

This Company Profile is issued as part of INPUT's European Business Integration Programme. If you have any questions or comments on this profile, please call your local INPUT organisation or Ben Pring at INPUT, 55-77 High Street, Slough, Berkshire, SL1 1DZ. Tel: 0(1)753 530444